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ABSTRACT

This report, third in a series, contains descriptive and analytical information on the use of simulation/games in elementary and secondary social studies classrooms. One hundred and thirteen teachers who are well versed in the use of simulation/games and who use them in their classes were surveyed. Among the findings are the following: (1) the major source of information about simulation/games is from the literature on simulations--principally journal articles and books; (2) teachers implement games based on scheduling needs, rather than on the time demands of the game itself; (3) the placement of games within the general curriculum plan varies from an introduction to a culminating activity; (4) most teachers are satisfied with the games and plan to use them again; (5) in comparison to other teaching methods, games more effectively help students develop desirable attitudes, an integrated and realistic view of the subject matter, and critical thinking ability; (6) games are an effective way to reach nonverbal students, to bring out underachievers, and get greater student involvement; and (7) the most frequently used techniques for evaluating games are observational. It is recommended that teachers explore the possibilities of using simulation/games. One of the greatest needs in the area is for more and better evaluation procedures. (Author/RM)

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SIMULATION/GAMES IN SOCIAL STUDIES: A REPORT

By

Katherine Chapman
and
Jack E. Cousins

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PREFACE

This report, the third in a series, is the result of research conducted during 1972-73 by the ERIC Clearinghouse for Social Studies/Social Science Education under National Institute of Education Grant No. OEC-0-70-3862, "Integrating Simulation/Games into Social Studies Curricula: An Analysis." By publishing a three-paper series, we intend to provide teachers and other educational decision makers with analytical and critical information about simulation/games in social studies education. Our research included reviewing the literature, surveying more than 100 teachers, and analyzing non-computer and commercially available simulation/games designed for use in grades 5 through 12.

Such a project seems important since simulation/games are currently popular with social studies teachers and are considered appropriate vehicles for social learning. Their effectiveness and popularity result mainly from the favorable student responses in the classroom. Teachers, for example, report that simulation/games stimulate active learner involvement, encourage realistic consideration of social issues, and provide as much information as other teaching strategies.

The first paper of the series, *Simulation/Games in Social Studies: What Do We Know?*, analyzes and evaluates the strengths and the weaknesses of simulation/games and discusses the state of the art of their use in social studies classrooms. The second, *Guidelines for Using a Social Simulation/Game*, aims to help teachers achieve maximum educational outcomes with simulation/games. This third paper, *Simulation/Games in Social Studies: A Report*, presents the results of a survey of 113 teachers who have used simulation/games. In the survey, we examined the types of games teachers were using, the placement of games in a curriculum plan, the range of grade levels at which games are being used, teacher goals in using games, and teacher developed outcomes for students who participated in games.

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ACKNOWLEDGMENTS

This study could not have been conducted without the cooperation of 113 elementary and secondary social studies teachers and eight contact persons. The participating teachers who agreed to have their names and schools listed are shown in Appendix A. To all these teachers we express our gratitude. The eight contact persons who coordinated the distribution and collection of the questionnaires and who provided thoughtful critiques of the manuscript are listed below.

Robert C. Bilek, Curriculum Associate, Social Studies, Salinas, California

Robert M. Cason, High School Teacher, Briarwood High School, East Point, Georgia

James C. DeBell, Director of Research and Development, Adams County District No. 50, Westminster, Colorado

Philip Cohen, Social Studies Consultant, Boulder Valley Schools, Boulder, Colorado

Dana Kurfman, Social Studies Supervisor, Prince Georges County, Upper Marlboro, Maryland

Jack Morgan, Associate Professor of Education, University of Louisville, Louisville, Kentucky

Edward Walker, formerly Social Studies Consultant, Nebraska State Department of Education, now Assistant Director of Social Studies, Oakland Schools, Pontiac, Michigan

Roger Wangen, Social Studies Consultant, State Department of Education, St. Paul, Minnesota

Robert S. Fox (deceased) and Nicholas Helburn, both former Directors of ERIC/ChESS, gave invaluable assistance to the conceptualization and planning of the project. Eileen Carlberg and Betsy G[illegible]r accomplished the seemingly impossible task of data tabulation. Christine Ahrens did the difficult editorial job on the manuscript, and Nancy Dille demonstrated her excellent typing and publication management skills in moving the final product into production.

To all of those who gave their time and effort, we offer a sincere "thank you."

Katherine Chapman
Jack E. Cousins

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SIMULATION/GAMES IN SOCIAL STUDIES: A REPORT

by

Katherine Chapman
and
Jack E. Cousins

Introduction

For more than six years many social studies teachers have been successfully using simulation/games in their classrooms. Roger D. Breed of Lincoln, Nebraska is one such teacher. When remembering what happened to his eighth-graders who played the *Labor-Management Simulation*, he states:

> At first I was quite fearful of using a simulation in classes of 36 and 38 students. Class management, the room size, and preparation of materials all posed ominous problems. However, after reading through the flexible yet thorough explanation of the simulation, we decided it was worth a try. The preparation of materials--stencils, patterns, instructions, arrangements of desks, etc.--was time consuming, but the overall results of the simulation made it all worthwhile.
>
> During the playing of the game, the students easily adapted to the roles of working men and company managers. Some managers were "enlightened"; they gave their workers "water breaks," incentive pay, and were the first to industrialize (that is, to purchase scissors so as to speed up the production of paper patterns which earned their company its income). One group was so advanced that they attempted to purchase the library's paper cutter so as to mass produce the patterns.
>
> On the other hand, some companies' managers were despotic when managing their company. They gave no breaks and demanded more and more of their workers. As a result, these workers unionized and eventually struck until the management negotiated a worthwhile contract. Because of these activities, all classes experienced a variety of labor-management relationships which resulted in a highly successful debriefing session. The *Labor-Management Simulation* became one of the more memorable events of the year both for the students and myself.

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Even though simulation/games have become a popular and successful tool for teachers, there is little critical information on their actual use in classrooms. Consequently, by surveying teachers and tabulating the data, we have attempted to close the analytical gap. The results of this investigation are presented in this report.

The first section in this paper describes how we located the teachers and conducted the survey. In the second, we present our survey findings. To obtain these results, we analyzed the participants' previous experiences with simulation/games, examined the sources of information that first informed them about games and simulations, and selected criteria for choosing specific games for detailed data tabulation. In addition we examined the two things teachers must consider when scheduling games for classroom use: time allotment and game placement in the curriculum. Our survey results also include the teachers' reasons for selecting individual games, their objectives when using certain games, and their methods for determining student learning. We also look at teacher evaluation of achieved objectives and the relationship of grade level and course content to individual game use.

In the third section, we present anecdotal material that demonstrates the varied and often colorful experiences of both students and teachers who use simulation/games. Interspersed throughout this report is additional anecdotal material. Appearing as quotations outlined by borders, these anecdotes further reflect the feelings of those who use simulation/games in social studies classrooms.

Beginning the Survey

Contact Persons. In order to find teachers for our survey, we contacted eight social studies professionals who favored the use of simulation/games and who worked in school districts using simulation/games in their social studies programs. These "contact" people represented all levels of educators: classroom teachers, professors of education, district social studies supervisors, district research directors, and state social studies specialists. We asked each contact to locate approximately 20 social studies teachers for the survey and to serve as liaison between the research project and the selected teachers. As contacts, their responsibilities included instructing teachers on the mechanics of the

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survey, distributing the questionnaires, and collecting and returning the completed forms.

One hundred and thirteen teachers from eight different states participated in the survey. They were asked to participate because of their experience in using simulation/games in social studies curricula. We did not intend for them to represent the total population of social studies instructors. Therefore, when considering the validity of any generalizations drawn from the data, the reader should consider the nature of the group surveyed--a group well versed in the use of simulation/games. Appendix A contains a list of the participating teachers and their schools.

Survey Forms. We developed three different forms to distribute to the survey participants. (Appendix B contains copies of these forms.) One form, "Teacher Background Information," asked about teacher exposure to and experience with simulation/games. The "Use and Placement of a Simulation/Game in the Curriculum" form asked about teacher use of specified simulation/games. A third form contained a set of guidelines teachers could use when implementing any social simulation/game. (For a complete report on the development and evaluation of these guidelines, see the second paper in this series, *Guidelines for Using a Social Simulation/Game*, Katherine Chapman 1973.) After the contact people and several others critiqued the first draft of each form, changes were made, and the revised forms were distributed. The completed forms returned by teachers provided the data for this study--data based on games used during a three-month period, January through March 1973.

Promising Games. We placed no limitations on the simulation/games teachers could use for the survey; however, we did give them a list indicating the games we preferred to analyze in our report. This list was compiled after we reviewed games available to the public. It cited 47 games that we thought were "promising"--ones that seemed workable and intellectually sound. (Appendix D contains this list of promising simulation/games.) The choice of the games to use and report during the survey, however, was still left to each teacher.

Dividing Teachers into Groups

The participants were divided into three groups--A, B, or C--

depending on the type of simulation/games they used. Teachers using "embedded" games--ones designed to be used with a specific curriculum program or unit (e.g. *The Game of Farming*, which is part of a unit in the *High School Geography Project*)--were assigned to Group A. Half of the teachers who used "free-standing" games--games that could be used by themselves, independent of a program or unit (e.g. *Dig*)--were assigned to Group B. The other half received the "Guidelines" form to use with the free-standing games and were consequently assigned to Group C.

> All three of my government classes were playing the game at the same time. One of the most pleasant things for me was the tone set by the various game directors. The day before play began, the two game directors from each class period took the game outside to read instructions and familiarize themselves with the mechanics of the game. The fifth period class did the best, and I believe it was because of the way the game director so forcefully took charge. This particular individual is not a "student" oriented person--in fact he spent most of his first three years of high school on the Dean's bench....
>
> I enjoyed watching the students become involved as they felt their roles--usually in the 2nd and 3rd day of play. The majority finally understood through experiencing it what the planning period was about. A couple of people really felt the role enough to plead for a deal rather than to starve--not only for themselves but the many other people they were responsible for.
>
> Even though several people had enough Baldicers to purchase a food machine, no one did until the last rounds of play as they were concerned about the inflation factor increase for others. Most players, who were in my opinion really into the game, were quite altruistic about the world food situation.
>
> Several students requested after the simulation that the game be played again later in the semester and use the war declaration factor....
>
> Wilmalee J. Schlentz, Salinas, CA
> Game: Baldicer Grade: 12
> Course: American Government

Originally we intended to survey 32 Group A teachers and 64 teachers each for Groups B and C, resulting in a total of 160. The number actually responding included only 113 teachers. Table 1 shows the group composition and location of those participating in the survey.

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Table 1.

Number of Teachers by Location and Group

Location	Total	Group		
		A	B	C
California (Salinas)[1]	10	1	9	-
Colorado (Boulder)	5	-	1	4
Colorado (Westminster)	13	6	6	1
Georgia (Atlanta)	15	6	2	7
Kentucky (Louisville)	20	3	-	17
Maryland (Prince Georges County)	17	4	13	-
Minnesota (Minneapolis-St. Paul)	12	1	-	11
Nebraska (Lincoln)	19	4	15	-
Oregon (McMinnville)	2	-	1	1
TOTALS	113	25	47	41

[1]Locations are listed by state, since a number of contact persons were in state education departments. The specific locale producing most or all of the reports is in parentheses.

Group A: Teachers using embedded games; nine used and evaluated the guidelines.
Group B: Teachers using free-standing games.
Group C: Teachers using free-standing games and evaluating the guidelines.

Nearly all reports came from school districts in or close to large population centers; therefore, they provide data on the use of simulation/games in urban or suburban schools.

We asked each contact person to choose, to the extent possible, ten intermediate (5-8) and ten high-school (9-12) teachers. Initially we suspected that simulation/games were used more at the senior high level, but wanted to collect data, if available, on use in lower grades. The

contact persons were unable to locate as many intermediate as high school teachers for the survey. Table 2 shows the distribution of number of games reported on by grade level. The 113 teachers reported on the use of 142 games used January through March 1973. Of the 142 games reported, 62 percent (88 games) were used at grade levels 9 through 12.

Table 2.

Grade Level and Number of Games Used

						Total
Grade Level[1]	5-6[2]	7-8	9-10	11-12[3]	Other[4]	
Number of Games Used	19	26	38	50	8	142

[1]Each category (e.g., "5-6") includes all classes at either grade level plus classes combining the two grade levels (e.g., a mixed 5th and 6th grade).

[2]Includes four classes mixed 4th, 5th, and 6th grades.

[3]Includes seven classes mixed 10th, 11th, and 12th grades.

[4]Includes the following: one mixed 2nd, 3rd, and 4th grade; four mixed 8th and 9th grades; one report based on use with 7th, 9th, and 10th graders; and two "no response."

Survey Results

Teachers' Previous Experience

In the survey we asked teachers to provide information on their previous classroom experience with simulation/games. On their forms they listed all of the games they had used once and those they had used more than once. Table 3 shows the results of their response.

As indicated in Table 3, teachers participating in the survey had some or even considerable experience with simulation/games. The amount of previous experience varied considerably from location to location. The mean number of games used once by teachers ranged from 1.8 to 6.1; the mean number used more than once ranged from 1.5 to 5.0. In general,

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Table 3.

Teachers' Previous Level of Classroom Experience with Simulation/Games

LOCATION	NUMBER OF TEACHERS	NUMBER AND MEAN OF SIMULATION/GAMES PREVIOUSLY USED			
		Used Once		Used More Than Once	
		Number	Mean	Number	Mean
California	10	25	2.5	46	4.6
Colorado (Boulder)	5	12	2.4	16	3.2
Colorado (Westminster)	13	80	6.1	38	2.9
Georgia	15	27	1.8	32	2.1
Kentucky	20	46	2.3	58	2.9
Maryland	17	33	1.9	26	1.5
Minnesota	12	65	5.4	57	4.75
Nebraska	19	51	2.6	43	2.26
Oregon	2	8	4.0	10	5.0
TOTAL	113	347	3.07	326	2.88

where teachers reported having used a large number of games once, they also reported having used a large number of games more than once. An exception to this were the teachers in Westminster, Colorado, who used the highest mean number of games once (6.1) but showed only a moderate mean number of games (2.9) used more than once. This information suggests that the Westminster teachers experimented with a number of different games rather than repeatedly using the same games.

As mentioned earlier in this report, the teachers surveyed did not represent the general population of social studies teachers. In designing the survey, we contacted school districts we knew had implemented many innovative social studies programs. These innovative programs include the use of a variety of simulation/games. Moreover, we asked the contact persons to distribute the survey forms to teachers who would be using games during the period January through March 1973. Because of

this selection process, one would expect higher simulation/games usage on the part of the survey teachers than from a random sample of social studies teachers.

Teachers' Sources of Information

The participants were asked to indicate all their sources of information regarding simulation/games. The sources are listed in Table 4, in order of the frequency of response.

Table 4.

Teachers' Sources of Information About Simulation/Games

(Number of Teachers = 113)

1.	Literature (journal articles and books)		125
2.	Workshops and teacher institutes		90
3.	Colleagues		83
4.	College or university courses		54
5.	District resource center or consultant		51
6.	Other		13
	Created own game(s)	4	
	Brochures, publishers' advertisements	3	
	Miscellaneous	6	
	Total Responses		416

The item receiving the most responses, "literature," included both journal articles and books on simulation/games. The second item, "workshops and teacher institutes," included those specifically dealing with simulation/games plus all other types of workshops and teacher institutes.

According to Table 4, teachers obtained information on simulation/games from several sources, mainly "literature," "workshops and teacher institutes," and "colleagues." Several teachers checked both types of literature, accounting for more responses than participants in the first category. It is striking how few teachers referred to the commercial pipeline--brochures and publishers' advertisements. For those who distribute such information, it would be useful to investigate further what

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sources of information would be helpful to users of simulation games.

Tabulated Games

Originally we had planned to analyze data on all the games reported in the survey. We were surprised, however, to find that the 113 teachers who submitted 142 reports used 71 different games and simulations. In Table 5 we have shown the number of reports received per game. (See Appendix C for a list of all games reported on.)

Table 5.

Number of Reports Received

Number of Games Reported On	Number of Reports Received Per Game	Total Reports
43	1	43
17	2	34
3	3	9
2	4	8
2	5	10
1	7	7
1	9	9
1	10	10
1	12	12
Total 71		Total 142

For the majority of the games, 43 out of 71, we received only one report. For 60 out of 71 games, either one or two reports were received. Because of the many games reported on, we decided to analyze in detail only those games receiving three or more reports. Table 6 lists these games and the number of reports received from each of the three groups of participants.

Table 6.

Tabulated Games, with Number of Reports Received, By Group

Game	Number of Reports			
	Total	Group		
		A	B	C
1. Caribou Hunting*	3	3	-	-
2. Dangerous Parallel	12	-	5	7
3. Democracy	5	-	1	4
4. Dig	5	-	4	1
5. The Game of Farming*	8	6	2	-
6. Ghetto	10	-	6	4
7. Metfab*	7	6	-	1
8. Portsville*	4	4	-	-
9. Seal Hunting*	3	3	-	-
10. Starpower	4	-	1	3
11. Tracts	3	-	1	2
Totals	64	22	20	22

*Embedded games

Henceforth, we will refer to the 11 games listed in Table 6 as the "tabulated" games. The 64 reports on these games constitute 45 percent of the 142 reports received, and most of the results presented in this paper are based on some or all of these 11 tabulated games.

An unexpected problem arose during our data tabulation when we discovered that some respondents had incorrectly named ome of the games in their reports. Consequently, we checked all suspect game names by phone or letter and, in most cases, clarified the title of the game.

Game Time Allotment

In this section we describe the scheduling of games; specifically the amount of classroom time teachers spent on specific simulation/games and in different phases of the games.

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In one of the questionnaires, we asked teachers to report the number of class periods they spent on a game and its related activities. We provided four categories for their responses: "in-class preparation," "actual game play," "game debriefing," and "follow-up activities." Since embedded games often give fairly explicit instructions on how much time to spend on each part, we only tabulated time spent on five free-standing games. The tabulated results appear in Table 7.

Table 7.
Median Number of Class Periods Spent Using Five Free-Standing Games and Conducting Related Activities

Game	Median Number of Class Periods Spent				
	In-class preparation	Actual game play	Game debriefing	Follow-up activities	Total Time
Dangerous Parallel	1	4	2	1	8
Democracy	1	3	1	1	6
Ghetto	1	4	1	1	7
Starpower	1	3	1	0	5
Tracts	2	5	1	2	10

With the exception of *Tracts*, which takes considerable time to set up and play, the games show similar time allotment patterns for preparation, play, and debriefing. It is somewhat surprising to find that similar amounts of time were spent on these games, especially since they vary in complexity and in the suggested amounts of time for play. For example, *Ghetto*, a straightforward board game, can be played in much less time once it is set up than *Dangerous Parallel*. *Dangerous Parallel* involves complex negotiations which can consume many class periods. The data in Table 7 suggest that teachers reporting on these games might have proceeded on the basis of their scheduling needs rather than on the intrinsic time demands of each game.

The median time reported for "follow-up activities" may be misleading, as there was considerable variation in the times reported for this activity. The variation suggests that "follow-up" is an ambiguous term and is interpreted to mean different things.

> In my relatively short tenure as a teacher, I have never had an educational experience that was any more rewarding than the simulation *Sunshine*. The excitement and involvement generated by the students in *Sunshine* are the things that make classroom teaching worthwhile.
>
> There are numerous examples of student involvement [that] could be cited, but perhaps one will suffice as being representative. One incident involved the residents of the ghetto and a confrontation with their "slumlord." The ghetto dwellers were being bitten and frightened by rats in their homes. Immediately, the residents of the ghetto formed a community action group that sent representatives into the community to seek help on how to handle their problem. The group's first interview was with a local lawyer. The lawyer could not give them enough information, but referred them to the local housing authority. From there they were referred to *eight* other agencies, the last of which referred them to a lawyer. The lesson learned by the students was a beautiful example of the total despair of the poor in dealing with governmental agencies and red tape.
>
> Don Hogan, McMinnville, Oregon
> Game: *Sunshine*
> Grade: Mixed 8-9
> Course: An elective social studies course called "Sunshine"

Game Placement in Curriculum Plan

This section discusses the placement of simulation/games in curriculum plans. Using an open-ended question, we asked each teacher where in a unit or course a game was used. Table 8 gives the answers for the five tabulated games that received two or more responses.

The striking thing about these data is the range of placement. Teachers' practice varied on the placement of a game in a unit or a course of study. *Dangerous Parallel* and *Ghetto,* for example, were used anywhere from an introduction to the end of a unit.

Two points seem worth mentioning regarding the survey results on

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Table 8.

Placement of Five Games in Curriculum Sequence

PLACEMENT OF GAMES BY TEACHERS	GAME					
	Dangerous Parallel	Democracy	Dig	Ghetto	Starpower	Totals
At or near beginning	4		1	3		8
Midway (more or less)	2	2	1	2	2	9
At or near end	2			2		4
Other placement		Used twice: following introductory research and at end				1

game placement. First, game designers and theoreticians themselves do not agree on the best placement for a game; according to our survey, teachers likewise do not agree. Second, many designers and theoreticians agree that a game should be embedded in a unit. That is, it should be used in conjunction with other learning experiences.

To find out why teachers scheduled games when they did, the following questions were asked.

> Was there anything about the game, itself, that suggested you should schedule it when you did? If "Yes," please describe.
>
> For what (other) reasons did you schedule the game at the time that you did?

Responses to both questions were grouped into the categories in Table 9. Respondents gave from one to three reasons each. This table refers only to the five games listed in Table 8.

The first item, "Game fitted into content sequence; supported other content," included almost half the responses (15 out of 32). A variety of responses were given for this item, such as "I felt that the students

Table 9.

Reasons Given for Placing Game in Curriculum Sequence

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REASONS	TOTALS	GAME				
		Dangerous Parallel	Democracy	Dig	Ghetto	Starpower
1. Game fitted into content sequence; supported other content	15	3	3	1	6	2
2. For a change of pace	4	1			2	1
3. Game fit into teaching strategies sequence	3	1		1	1	
4. To increase students' receptivity to subsequent materials	2	1			1	
5. Expediency	2	1			1	
6. Game was available	2	1			1	
7. To meet deadline for survey	2	1	1			
8. Other	2	1		1		

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had gained a sufficient background on the American people to understand what a ghetto is and were ready to begin experiencing conditions," and "It was a part of the topic we were covering."

The second, third, and fourth items in Table 9 relate to teaching/learning techniques. The second item, "For a change of pace," includes such responses as "Variety" and "Logical time for a 'fun' activity."

Before explaining the game, I should perhaps describe the class. They are, for the most part, very white, middle class. We had just had a semester change and I had lost all of my previous students except for four. All my new students therefore were very testy and very unruly for awhile. The game, luckily, helped bring them together and also to accept my class. And they have been thoroughly cooperative ever since!

There are 7 rounds to the Stock Market Game. In the first rounds, most invested their money in the banks or a few were bored and didn't participate. But as soon as the students who had invested in the market began shouting after they doubled their stocks, then the enthusiasm immediately spread to all. When some doubled their money they were all cheering and screaming. It was a truly chaotic Stock Market. And when a stock's bottom dropped out, one of the heavy investors literally swore and threw his worthless certificates on the floor! The bankers in the game were getting frustrated because they couldn't return all investors' money and [they] even resorted to giving out Bank I.O.Us. It is interesting to note, however, that one boy pointed out one of the fallacies of the game: that the Stock Quotation was not a reflection of their buying and selling, but arbitrarily set by the teacher. I told him he was correct, but to imagine that the class was only a small segment of an entire country buying and selling. That explanation seemed acceptable to him.

Since this game was a prelude to a study of the Great Depression, students were ready to dig into the reading to discover the after effects. One girl even went down to our Historical Society, which was showing a display of over 50 artists' works [created] during the Depression, and took snapshots of 10 of them to bring back to the class.

Gretchen Olberding, Lincoln, Nebraska
Game: *Stock Market* Grade: 8
Course: American Studies: Great Depression

The third, "Game fit into teaching strategies sequence," included responses like "this game is very good [to precede the game of] Section" and "Role playing is the best way for students to understand the mechanics of how foreign policy decisions are made; therefore, it is important to play such a game early in the course." Two responses were marked in the fourth item. They implied that the teachers wanted to use simulations in order to raise students' enthusiasm.

Items 5, 6, and 7 categorize pragmatic responses of teachers. Item 5, "Expediency," includes one respondent who scheduled the game to fill a time void and one who scheduled a game to sustain interest during the end of a marking period. Items 6 and 7, "Game was available" and "To meet deadline for this survey," are self-explanatory.

To summarize the results in this table, Item 1 is the only category in which there were responses for all five games. In total, there were nine responses for Items 2 through 4, dealing with teaching/learning techniques. Such results suggest that teachers, while valuing simulation/games as teaching tools, gave serious thought to scheduling a game so that it fitted into the content sequence.

Game Selection and Satisfaction

In this section we discuss the teachers' reasons for selecting games and their general level of satisfaction when using their choices. Only the data presented by Group B and C teachers (N = 104) are appropriate for this section, since Group A teachers did not report on an individual game but on an entire curriculum package.

We asked Group B and C teachers the question, "Why did you select this game?" and let them select as many choices as they wished from seven possible responses. Responses totalled 135. The answers are listed in Table 10 in order of the frequency of response.

According to this table, teachers selected their games for one (or more) of four main reasons, each of which received a nearly equal number of responses. Together, these four reasons account for 85 percent (115 of 135) of the total responses. The first three reasons indicate that teachers had prior information about the game: "You knew from using it before that it works well," "You wanted to use this specific game and made

Table 10.

Reasons for Game Selection

(Groups B and C: N = 104)

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1.	You knew from using it before that it works well.	29
2.	You wanted to use this specific game and made a point of getting it.	29
3.	Someone told you about it so you decided to try it.	29
4.	You wanted to use a (any appropriate) simulation/game and, when you checked, this one was available.	28
5.	Someone (e.g., principal, social studies consultant, fellow teacher) talked you into using it.	10
6.	It was sitting on the shelf, so you felt you should use it.	4
7.	Other	6
	Exposed to game during workshop or course 2	
	Miscellaneous 4	
	Total Responses	135

a point of getting it," and "Someone told you about it so you decided to try it." These three account for about two thirds (87 of 135) of the total responses. Reason 4, "You wanted to use a (any appropriate) simulation/game and, when you checked, this one was available," is the only commonly given reason for choosing a game that did not reflect prior knowledge and/or judgment about the game selected. Although the fourth reason does indicate a rather pragmatic approach to the choice of a game, it still implies that the teacher valued gaming as a technique.

The amount of prior information about and interest in simulation/games reflected in these data support our supposition that the sample surveyed represented those social studies teachers who are more informed about simulation/games than the total population of social studies teachers. Thus, it is not surprising to discover that these teachers were well satisfied with the games they used.

Teachers were asked: "If you could, would you use this game again?" Possible responses were "Yes," "Yes, with qualifications or under dif-

ferent circumstance" (shortened to "Yes-but" in the table), and "No." Their responses are given in Table 11.

Table 11.

Would Teacher Use Game Again?

GROUPS	Yes	Yes-but	No	No Response
B and C N = 107	86	15	4	2
A N = 34	29	3	0	2
All Groups N = 141	115	18	4	4

Of the 107 reports from Groups B and C teachers, only four indicated they would not use a particular game again. Reasons for outright rejection of a game were: the directions were ill defined (*Tracts*); the game was too complicated (*Life Careers*); the game was too long and involving grades in the game was devastating to students (*Panic*); and it rained too much to play (*Dig*).

The 15 teachers (out of 86) in Groups B and C who indicated they would use a specific game again under different circumstances were generally positive about the games. They listed various changes they planned to make the next time they used the game, such as using smaller groups; taking more time to introduce the game; taking more time on introductory related content; simplifying instructions; using game with "slow," "below average," or "average" students; or not using game with "average," "low-verbal," or "unmotivated" students.

Group A teachers seemed to be a little more satisfied with their games than were Groups B and C. They listed no "No" responses and only three

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"Yes-but" responses. Such results might be attributable to their use of planned curriculum packages which included comprehensive teacher guides and provided more support for the teacher than did free-standing games. Thus, a teacher who used an embedded game (Group A) was protected from making the "mistakes" made by teachers in Groups B and C.

> Explain what you learned by playing the game of *Starpower*. What was it about?
>
> The game of *Starpower* is about capitalism--material wealth determines social position, chances for success, in addition to future breaks and governing power. We begin by discovering that random distribution of wealth doesn't mean equal distribution of wealth, nor does the free market tend to equalize wealth distribution. On the contrary, if anything we find that it *concentrates* the wealth. From then on, the plot thickens, the rich get richer, the poor get comparatively poorer. Competition gets strong, selfish traits show up, people get frustrated with the game and skip class. (*But you can hardly skip life!*)
>
> Student of Thomas Keljik,
> Minneapolis, Minnesota
> Grade: 12

Game Objectives and Evaluation

This section reports on the objectives teachers had when using games and on their ways of evaluating student achievement of the objectives.

Objectives. First, teachers were asked to indicate which list or statement of objectives accompanied the simulation/games they used. Then they were asked to mark, on a five-point scale, the level at which students achieved these objectives. Table 12 identifies the five points on the scale and gives the number of respondents who checked the different levels of achievement as well as the number of teachers who indicated that no objectives were provided.

As shown in this table, all but one respondent indicated that either "most students achieved most objectives" or "some students achieved some objectives." This suggests that teachers felt the tabulated games were quite successful in terms of student learning outcomes. It is

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interesting that close to 10 percent (6 out of 62) of the teachers perceived that there were no objectives provided with a game when, in fact, each of the games listed in Table 12 actually included objectives. (One possible exception would be an early, experimental version of the game *Starpower*).

Table 12.

Tabulated Games: Student Achievement of Stated Objectives

GAME	Number of Respondents	No Objectives Provided	Level of Objectives Achieved					
			All students achieved all	Most students achieved most	Some students achieved some	A few students achieved a few	No student achieved any	No answer
1. Caribou Hunting	3	1	0	1	1	0	0	0
2. Dangerous Parallel	12	1	0	8	3	0	0	0
3. Democracy	5	1	0	2	2	0	0	0
4. Dig	5	0	0	4	0	0	0	1
5. The Game of Farming	8	0	0	5	3	0	0	0
6. Ghetto	10	2	0	5	3	0	0	0
7. Metfab	7	0	0	5	2	0	0	0
8. Portsville	4	0	0	1	3	0	0	0
9. Seal Hunting	3	0	0	3	0	0	0	0
10. Starpower	4	1	0	2	1	0	0	0
11. Tracts	3	0	0	2	0	1	0	0
Totals	64	6	0	38	18	1	0	1

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> Students enjoyed this simulation tremendously. Because of the detailed role descriptions and carefully given role instructions, they all grasped easily "who they were" and what their goals were to be. The miners enjoyed their role as hard-working, whiskey-drinking men, as much as the managers gloried in their high salaries and corporate decision-making responsibilities. Eventually both groups decided they "needed" each other and negotiations were pursued in earnest.
>
> One of the cleverest incidents the students thought up was a successful move by the mine owners to "frame" the union organizer. They soon caught on that in a "company" town, they could pass their own laws. One day, without anyone foreseeing the significance, they passed a law making it illegal to have in your possession more than 3 bottles of whiskey at a time. Their newspaper published an article about the importance of "hard work" and "good health" from the "concerned" mine owners. A few minutes later the union organizer was questioned and found to have 8 bottles of whiskey in his possession. Despite his protests of not knowing where they came from, he was hauled off to jail to await trial. He was denied bail and visitors--and the remaining miners were left in the lurch with their most articulate spokesman gone. They attempted to find a new miner to negotiate, but the blow to their morale was tremendous. They began to really *feel* the powerlessness of their position.
>
> Helen Hart, Lincoln, Nebraska
> Game: *Hard Rock Mine Strike*
> Grade: 11
> Course: American History

Evaluation. Another question on the forms asked the teachers to indicate their methods of determining student achievement. Table 13 provides their responses. It is apparent from this table that teachers did not depend on a single method to determine student learning. In fact, on the average, each teacher used over three different methods. This may be attributed to the fact that many of the techniques are subjective, and teachers wished to use several methods to substantiate their judgments.

The three most frequently used evaluation techniques were "watching and listening during the game play," "students' responses during debriefing discussion(s) and activities," and "general observation of students' behavior during and after the game." Each of these techniques is observational, a type of evaluation not traditionally used with frequency

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Table 13.

Methods Used to Determine Student Learning

(Number of Respondents = 139)

1.	Watching and listening during the game play		126
2.	Students' responses during debriefing discussion(s) and activities		124
3.	General observation of students' behavior during and after the game		118
4.	Teacher-made tests		32
5.	Students' final scores in the game		29
6.	Tests that came with the game		14
7.	Other		25
	Responses on teacher-made written evaluations or questionnaires	10	
	Questionnaire or worksheet (origin not specified)	4	
	Standardized tests	2	
	Miscellaneous	9	
	Total Responses		468

by classroom teachers. The more traditional types of evaluation, such as teacher-made tests, were ranked considerably lower than the observation methods. The traditional methods of evaluation listed--"teacher-made tests," "students' final scores in the game," "tests that came with the game," and the "other" methods--accounted for only 21 percent (100 of 468) of the evaluation methods used.

These data indicate that the participants in this survey clearly used non-traditional methods to evaluate student outcomes for simulation/games used in their classrooms.

The outcomes teachers anticipated when presenting a game did not represent factual learning; rather, they represented higher cognitive learning (for example, "How a war can change the total picture of an area") and social learning (for example, "Compromising--ability to give and take for the good of the whole community.") Such objectives are in keeping

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with the general learning outcomes expected by the designers of simulation/games. However, sophisticated test items are required for accurate measurement of these objectives, and only rarely do commercial simulation/games contain such test items. It is equally rare to find a teacher who has the training and skill to write sophisticated test items. Thus, the teachers in our survey who expected students to gain higher cognitive and/or social learnings from a game generally had no choice but to use subjective judgments when evaluating the achievement of these objectives. As of yet, very few objective evaluation techniques for measuring game-connected outcomes have been developed by game designers, teachers, or others.

> What do you feel were the most important things that you learned about people living in a ghetto from playing the game?
>
> You need an education in order to get a good job.
> It's hard to get a good job.
> Children cost.
> They take chances.
>
> Student of Philip Moss, Westminster, CO
> Game: *Ghetto* Grade: 8

> Reform of the game: How would you change the game to make (including of lobbyists) more realistic? What effects would this have on the game?
>
> Lobbyists in real life are an influential pressure on Congressmen. In the game it was a + or - on paper. Lobbyists groups should be formed for particular bills to get them passed or defeated. Receiving a grade on accomplishment of goal and procedure.
>
> Student of James Kyle, New Hope, MN
> Game: *Politician* Grade: 12

Expected and Achieved Outcomes

In the survey, two questions were asked to determine the level of intended and actual outcomes for both the teachers and the students who used simulation/games. In the first question, teachers were given a list of 19 outcomes which might be achieved in the use of a simulation/game. They were asked to rank order this list, according to which objectives they most wanted to see students achieve. The 19 student outcomes are listed below. Those shown with an asterisk (*) are the seven which consistently received high priority scores as desired student outcomes from the respondents. Among items 1-7 and among items 8-19, the ordering of outcomes is arbitrary.

1. *Develop or alter certain attitudes
2. *Gain a more integrated and whole view of the subject matter of the simulation/game
3. *Are more involved
4. *Develop empathy for people in roles they play
5. *Practice cooperation
6. *Gain a more realistic view of the subject matter of the simulation/game
7. *Improve their strategic thinking abilities
8. Learn certain facts
9. Make judgments about value questions involved in the simulation/game
10. Practice competition
11. Are more enthuiastic about the subject matter of the simulation/game
12. Are better able to remember material learned prior to the simulation/game
13. Enjoy themselves
14. Have the chance to seek and find as many solutions to the problem presented as possible
15. Increase their sense of control over the environment
16. Are stimulated to ask questions
17. Pay more attention
18. Spend less time listening and more time "doing"
19. Are more motivated

In general, the seven desired outcomes suggest that teachers intended for their students to develop a more integrated and realistic view of the

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subject matter through the use of simulation/games. Furthermore, outcomes of this nature are predicted by writers of simulation/games literature. For example, many game theorists and developers state that students will develop a holistic view of the subject matter, which includes the ability to be involved, empathic, and cooperative.

After using simulation/games in the classroom, the respondents were asked to indicate which five of the 19 outcomes were actually achieved by their students. Tables 14, 15, and 16 report the result of achieved outcomes for three simulation games: *Ghetto*, *Dangerous Parallel*, and *The Game of Farming*. These are the three games which received the most reports. The outcomes reported for each game are those which one-half or more of the teachers responding felt were achieved.

Table 14.

Outcomes for Students: *Ghetto*

Number of Respondents = 10

Desired Outcome Item Number	Item	Number of Respondents Checking as Actual Student Outcome
1.	*Develop or alter certain attitudes	8
4.	*Develop empathy for people in roles they play	6
6.	*Gain a more realistic view of the subject matter of the simulation/game	5
13.	Enjoy themselves	5

*Indicates items receiving priority as desired student outcomes.

The tally of the ten teacher responses for *Ghetto* in Table 14 indicates that three of the four most achieved objectives were among the seven outcomes judged to be most important by the teachers. According to the developers, a primary objective of *Ghetto* is to give students "vicarious experience of pressures of living in underprivileged areas of an inner city." (*Ghetto Coordinator's Manual*. By Dove Toll. New York:

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Western Publishing Company, Inc., 1969, p. 5) The results of the survey suggest that the teachers who used *Ghetto* understood the general purpose of the game, and that the students actually achieved the primary objective stated by the developers.

Table 15.

Outcomes for Students: *Dangerous Parallel*

Number of Respondents = 8

Desired Outcome Item Number	Item	Number of Respondents Checking as Actual Student Outcome
4.	*Develop empathy for people in roles they play	4
5.	*Practice cooperation	5
7.	*Improve their strategic thinking abilities	5
13.	Enjoy themselves	4
18.	Spend less time listening and more time "doing"	6

*Indicates items receiving priority as desired student outcomes.

The developers of *Dangerous Parallel* state that students should learn "to experience the role and problems of international decision making and decision makers." (*Control Manual Dangerous Parallel*. Glenview, Ill.: Scott, Foresman and Company, 1969, p. 7) The desired outcome, "develop empathy for people in roles they play" parallels this objective, as does the outcome, "improve their strategic thinking abilities." The role of international decision making would involve strategic thinking abilities. "Spend less time listening and more time doing" was not ranked as one of the seven priority outcomes by teachers; however, six of the eight respondents noted that this was an actual achieved outcome for students using *Dangerous Parallel*.

The tally of the eight responses on *The Game of Farming* for Table 16 shows four actual outcomes reported by one-half or more of the eight

respondents as being achieved.

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Table 16.

Outcomes for Students: *The Game of Farming*

Number of Respondents = 8

Desired Outcome Item Number	Item	Number of Respondents Checking as Actual Student Outcome
2.	*Gain a more integrated and whole view of the subject matter of the simulation/ game	4
6.	*Gain a more realistic view of the subject matter of the simulation/game	5
11.	Are more enthusiastic about the subject matter of the simulation/ game	5
13.	Enjoy themselves	4

*Indicates items receiving priority as desired student outcomes.

The instructions for *The Game of Farming* list two major educational objectives: "At the conclusion of the activity the student should be better able to: 1) Indicate the kinds of decisions that farmers must make and discuss the factors that influence these decisions. 2) Discuss these influences in terms of their relative importance for any particular agricultural situation." (*Geography in an Urban Age: Unit 2. Manufacturing and Agriculture*. New York: The Macmillan Company, 1969, pp. 67-93) These two objectives are similar to items number 2 and 6: "gain a more realistic view of the subject matter of the simulation/game" and "gain a more integrated and whole view of the subject matter of the simulation/game." In *The Game of Farming*, half or more of the eight respondents reported that students did actually achieve the intended student outcomes.

Although the respondents did not rank "enjoy themselves" as one of the seven priority student outcomes, it is clear that this was an achieved

outcome in each of the three games discussed above. It is interesting to observe that students achieved important learning objectives, and at the same time enjoyed the learning process.

Teacher Outcomes for Tabulated Games. A second question was asked of the respondents to determine the level of intended and actual outcomes for teachers. They were given a list of 11 items and asked to rank order the items as "intended outcomes for the teacher who:"

1. *Teaches this material more efficiently than possible by another method
2. *Reaches his non-verbal students
3. *Reaches his bright underachievers
4. *Involves more students
5. *Provides variety (change of pace) for his students
6. Checks how much the students have learned on the subject up to this point
7. Reaches his slow students
8. Escapes the role of judge and critic
9. Provides an enjoyable interlude for his students
10. Rewards students for earlier behavior or achievement
11. Identifies important behavior patterns, such as "non-participant," "leader," "obstructionist," etc.

The five items shown with an asterisk (*) are those which consistently received high priority scores as more desirable intended teacher outcomes. Table 17 shows the number of times these five intended teacher outcomes were checked as actual outcomes. In almost all cases, more than half of the respondents checked actual outcomes that were also marked as important intended outcomes for each game. In many cases, this proportion was much higher.

The totals indicate that the intended outcome of involving more students was reported as achieved by 50 of the 60 respondents. Teachers were not as successful as they might have wished in reaching non-verbal students and bright underachievers, although almost one-half of the respondents did achieve these intended outcomes.

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Table 17.

High Priority Intended Teacher Outcomes

and Level of Actual Outcomes by Game

N = number of respondents for each game

Actual Outcomes Checked: Simulation Game

Outcome Item Number	High Priority Intended Teacher Outcomes	Caribou Hunting N = 3	Dangerous Parallel N = 9	Democracy N = 5	Dig N = 5	Farming N = 8	Ghetto N = 10	Metfab N = 6	Portsville N = 4	Seal Hunting N = 3	Starpower N = 4	Tracts N = 3	Totals N=60
1.	Teaches this material more efficiently than possible by another method	3	7	4	2	5	10	3	2	2	1	2	41
2.	Reaches non-verbal students	3	1	3	3	4	2	3	2	1	3	3	27
3.	Reaches bright under-achievers	0	3	1	4	3	5	3	3	0	3	3	28
4.	Involves more students	3	8	4	5	8	8	5	2	1	4	2	50
5.	Provides variety (change of pace) for students	2	7	3	1	5	8	3	2	1	3	1	36

Range of Use

Respondents were asked to list the titles of the courses in which they used simulation/games and the grade level of each course. The survey showed that ten of the tabulated games were used in a variety of courses, spanning a range of four or more grades. Table 18 shows the grade range in which the tabulated games were used and Table 19 shows the course titles in which six of the free-standing games were used. (Embedded games usually were used with their original surrounding course or unit materials.)

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A period was set aside to play *Lifeboat* at the request of some of the students in class. They believed it to be a useful addition to the subject then under discussion. I was already familiar with the game from other sources and saw some value in it. A bright student already familiar with the game was selected to instruct the class and to proceed as the prime resource person. This freed the teacher so that he could more perfectly observe the results and take notes for later class discussion. The instructions were simple; the roles were quickly assigned with some quick exchanges among students who preferred a role other than the one assigned. A few minutes were given to the class...to study the roles assigned...

The first ten minutes of the game witnessed considerable chaos. Some otherwise normally quiet students became quite frantic and proceeded to dominate much of the action and in some cases considerable viciousness (occurred). Persuasion and in some cases physical force was used (but not dangerous to life and limb) to accomplish the expulsion of useless roles.

Procrastination, debate, and indecisiveness ended in the inevitable disaster threatened at the beginning of the game. The storm hit and the entire group perished when the deadline arrived.

In the last moment the "priest" in a dramatic appeal asked for volunteers to follow him into the sea; he jumped, but the others failed to respond.

The game tended to be noisy and chaotic, but the class settled down to a fruitful discussion once it was over.

Mauro Naccarato, Salinas, California
Game: *Lifeboat* Grade: 11-12
Course: Philosophy

As can be seen in Table 18, *Dangerous Parallel* and *Dig* were used with students from grades six through twelve, a span of seven grades. Four other games were used with seventh through twelfth graders, and one with eighth through twelfth graders. As previous data indicate, teachers were generally satisfied with the games and with student chievement of objectives; therefore, it seems that the games listed in Table 18 can be successfully adapted to many grade levels, although not necessarily to such wide ranges as shown in Table 18.

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Table 18.

Grade Ranges in Which Games Were Used

	GAME	GRADE RANGE
1.	Caribou Hunting*	5-6
2.	Dangerous Parallel	6-12
3.	Democracy	6-9
4.	Dig	6-12
5.	The Game of Farming*	7-12
6.	Ghetto	7-12
7.	Metfab*	7-12
8.	Portsville*	9-12
9.	Seal Hunting*	4-7
10.	Starpower	8-12
11.	Tracts	7-12

*Embedded games

Table 19 describes courses in which free-standing simulation/games were used. Each of the games are used in a variety of courses, with all of the simulation/games being used for at least four course titles, and *Ghetto* being used for ten different course titles.

Table 19.

Courses in Which Game Was Used

(Free-Standing Games)

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GAME	COURSE TITLES
1. Dangerous Parallel	Political Issues; Foreign Policy Issues; Social Studies; World History; World Geography; U.S. History; Comparative Political Systems
2. Democracy	Local and State Government; Core (Social Studies and Language Arts); Social Studies; American History
3. Dig	World Studies; Behavioral Science; Minnesota Project Social Studies (Unit I--North America Before White Man); Anthropology
4. Ghetto	American Studies (poverty); Psychology; American History; World Geography; Core; Social Problems (Sociology); Social Studies; Modern Europe; World Problems; Government
5. Starpower	Changing Culture; Social Issues; Communist State; Psychology
6. Tracts	Urban Geography; Social Problems; Political Science; Sociology; Social Issues

Anecdotes

The participants were asked to provide, in whatever manner possible, anecdotal material on their classroom experiences with simulation/games. About 60 interesting--and often colorful--reports were received. Most of them were in essay form. Other types of material, however, were also received. For example, two teachers sent color photographs of students preparing artifacts which included a "rosetta stone" for *Dig*. In addition, there was a set of posters ("Help We're Dying") prepared by students who

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played *Baldicer*. One teacher sent copies of the "Philadelphia Argus," a student publication developed during the game *1787*. Another sent copies of a newspaper published during a play of *Sitte*. Several sent copies of student evaluations, which included some truly thoughtful comments. Three videotapes and one audiotape also arrived. The videotapes brought to life, for instance, a shouting, finger-pointing argument over slavery in *1787* and the laments of the dying in *Baldicer*. The audiotape presented a loud student bargaining in *Pit*.

It is impossible to report comprehensively on all the anecdotes received; however, some choice quotations from both teachers and students are included in this report. In addition, this section presents some other comments that give insight into what happened when one (or more) teacher(s), 30 (more or less) students, and one simulation/game were combined in a social studies classroom. Many described similar occurrences: the students were more involved than usual; a simulation/game takes more preparation time but is worth it; each class makes something different out of the game experience. The most frequently recurring comment concerned "new" behavior on the part of many students. For example, the quiet student blossomed:

> I find that quite often the students that become the best leaders are sometimes the quiet type in other situations. (*Dangerous Parallel*)

> I noticed...the enthusiastic participation of heretofore "silent" members of the group. (*Seal Hunting*)

Various other things were also reported. Gut-level feelings overrode propriety:

> A young lady, seventh grade, upon receiving her outcome card yelled at the top of her voice, "Oh shit." Talk about a gut level reaction; I was dumbfounded and then realized it was probably a typical reaction of a farmer who had been nailed. (*The Game of Farming*)

"Difficult" students found constructive roles:

> The class was composed mostly of senior boys who were categorized as "mess-arounds" and who were very anxious to get out of school. They became involved in the Anthro *Dig* game more than anything in the Anthro course....The agreement was that the holes we dug in the schoolyard would be filled when we completed the simulation. I was pleased to see several students show up a couple of days after graduation... to fill the holes. (*Dig*)

> A student who was especially difficult in class actually "took over" and became a leader of his group, and a leader of the other students--playing the game as well as being responsible for class discussion and ways and means to improve the game. (*American History Games*)

"Slow" or non-verbal students found constructive roles:

> (The game) provided the low students with an opportunity to express themselves in non-verbal behavior: art/illustrations, etc. It also identified behaviors that we previously had not been able to (see in) others. An example here was the student who would not communicate with peer group but when provided with opportunity to "entertain" was excellent. (*Great Leaders Game*)

> At first the more verbal students ran the show until it was apparent that some shy, inhibited student might come out with all the food and refuse to share with the big shots. Often my non-verbal, withdrawn students were delighted at the thought they had kept everyone in their group from starving to death. (*Seal Hunting*)

> The game provided motivation (even the "cowboys" got involved).... A new feeling of "worthwhileness" developed in some of the auto mechanics students when they won the game. The professor's son had to see them in a new light also. (*Destiny*)

Several teachers specifically noted the way students enjoyed interacting with each other during class.

> The part of the game that they enjoyed most (from my observation and the debriefing discussion) was the bargaining session. (*Democracy*)

> Many of the students enjoyed this game because they could trade with other students and make deals. This sometimes was carried on after class. (*Empire*)

> All classes were very enthusiastic about the game (due partially to the fact that the game allows them to pass notes). *(Sitte)*

There were numerous observations on factors which limited the success of the simulation/games being played. For example, tying success in the game directly to students' grades created probl s.

> In order to make the experience as realistic as possible the simulation instructions require that all gains or losses of money...in the game be at the end translated into at least a partial relationship to the (student's) grade....Since the simulation lasted several weeks this was a large part of the grade for the course. Most certainly it was a gripping and memorable experience to witness the crash of the market. The screams and moans of students who saw themselves "wiped-out" in a few minutes time could be heard several rooms away...for some the experience was too real. Several were reduced to tears. Many withdrew

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> from the simulation at that point and refused to participate (further)....One or two students were so upset they even stopped coming to class. Here, I believe we have a case of too much realism.... (*Panic*)

> This game was played near the end of the grading period so the students were more grade-conscious than usual. They knew their grade would depend on their scores....Therefore, they were quite conservative in their buying habits....It took quite a bit of advertising and "hard-sell" to get them into the proper "This boom will last forever, buy, buy, buy!!!" frame of mind that the game requires if the subsequent "crash" is to have its psychological impact. (*Panic*)

Required arithmetic or reading skills sometimes were beyond students' capacities:

> The instructions are written on such a level of comprehension and complexity that, in the junior high, only above average readers (in the eighth grade) could follow with ease. Average readers required more time and assistance--and at times practice sessions--so they could participate effectively. Finally, poor readers, while excited about role-playing, were often perplexed by the complexity of the instructions. (*Colony*)

> The most outstanding anecdotes that came out of this game were in regards to the students' inability to multiply by 2s and 3s. (Eleventh grade slow readers playing *The Game of Farming*)

Students sometimes were unaccustomed to and unskilled in the kinds of behaviors called for:

> To be effective, (the game) requires a great deal of interaction between the participants. I used it in a class in which there was little prior interaction. The game did not change this. I feel this may be why it was not a success. (*Starpower*)

> (This) was the first simulation for three-fourths of the students. At first they had difficulty adjusting to the game situation in that they were not accustomed to the freedom of movement within the classroom that the simulation allowed. (*Operation Bigger Beef*)

> Students have not been too creative in dealing with this activity, because it appears they still want the teacher to play a very active role in the class. It seems that a good many of the decisions made are to please me. (*Metfab*)

Some students were negatively reinforced.

> I used this game with basic students....My only concern with the game was that it has, by his historical nature, failure built into it. Farmers in the 1920s and early 1930s failed for a number of different reasons. Unfortunately basic students...have since their earliest learning experiences been failures also. Many of them thought that it was their fault when their farms lost money. I had to continually stress that it

> was not their fault but was the condition of the times which caused farm failures....Somehow they just couldn't accept that their failure as farmers was really success in U.S. history knowledge. (*The Game of Farming*)

Insufficient preparation was damaging:

> *Enterprise*...was not well received by my students. Generally their comments focused on the need for greater understanding of the basic ingredients (i.e., bank operation, governmental regulations, stock market functions, etc.)....My personal attitude about the game is different. My perception of the game is that it is well organized, creatively developed, and potentially educational....My overall attitude (toward the) game is one of value based upon better teacher preparation and with greater student preparation. (*Enterprise*)

Teachers also reported student carryover of the game experience into other classroom activities. For example:

> This simulation has made teaching the unit on government enjoyable and much easier for me and the students. After doing *1787* students began to ask questions about how the other levels of government operate, which made it easier to get into the levels of government. (*1787*)

> ...the students were assigned...roles as Indians, settlers, or birds and animals found in the environment 150 years ago. Steve, a sensitive fifth grader, was heard to say, "I never thought about animals dying before; but now that I'm one of them, I think it's sad." (*Ecopolis*)

> ...concurrently to playing the game we began to look at the... proposed location site of a new trucking plant....Information gleaned from site selection in the game was applied to the areas being looked at by the trucking firm. The whole idea really caught fire when some students decided there may have been a more advantageous place to locate. So we got topographic maps, zoning maps, utilities maps, etc., and set out to suggest alternate sites.... (A) committee volunteered to write a letter to the firm explaining what we had done and the rationale on which they had based their other selection. As it turned out the company built on the original site but we did receive a letter from them...presenting their rationale for selecting the site they did and noting that the alternate site the students had chosen was one of the sites the company was considering also. (*Metfab*)

> ...for the rest of the nine weeks students kept saying--"But when I was a newspaperman I didn't always tell the truth, how do we know they're telling the truth now?" and "But, how does our reason for entering Vietnam compare to our reason for entering Cuba," and "But, remember it wasn't that simple in 1898, it can't be that simple now," and "But," "But," "But...." It was great. (*Destiny*)

While a number of the anecdotes reported problems or negative outcomes,

a large majority indicated favorable and enthusiastic attitudes on the part of the respondents toward the use of simulation/games in their social studies classrooms.

Summary

This report has provided some descriptive and analytical information on the use of simulation/games in social studies classrooms. Data were gathered in a survey of 113 social studies teachers--people selected because of their experience using simulation/games in the classroom. As emphasized earlier in the report, it was not intended that the survey participants represent the general population of social studies teachers. Nor was there an attempt to determine how extensively or widespread simulation/games are used in the social studies. In order to have collected such data, it would have been necessary to conduct a much larger and more expensive study.

Summary Findings

The 113 respondents in this study reported on the use of 71 different games. Many games were reported by more than one respondent; in all, a total of 142 reports were received. Respondents were from nine different school districts in eight states. School districts participating in the survey had implemented innovative social studies programs, including a variety of simulation/games; therefore, the majority of the respondents had some experience in the use of simulation/games in the classroom.

Participants in the study indicated that the major source of information about simulation/games was from the literature on simulations--principally journal articles and books. Other important information sources included workshops and teacher institutes and information supplied by colleagues.

For purposes of this study, respondents were divided into three groups--A, B, and C. Group A teachers used embedded games--games which are an integral part of an entire curriculum. Groups B and C teachers used free-standing games, with Group C being given a set of guidelines for use in implementing the games they were using.

Game Time Allotment

Teachers reported on the number of class periods spent on game play and related activities. Their reports indicate that, in general, approximately equal amounts of time were spent on each of the activities related to the use of simulation/games, regardless of the nature of the game. This suggests that teachers implement games based on scheduling needs, rather than on the time demands of the game itself.

Game Placement in Curriculum Plan

The placement of games within the general curriculum plan varied from an introduction to a culminating activity. There was no general pattern for game placement, although the most often stated reason for placement was that the "game fitted into content sequence and supported other content."

Game Selection and Satisfaction

Sixty-four percent (87 of 135) of the responses to the question, "Why did you select this game?" indicated that teachers had prior knowledge about the game, either from using it themselves or hearing about it from someone. An additional 21 percent indicated an interest in simulation/games, although they did not have a prior knowledge about the game, by noting that they "wanted to use a (any appropriate) simulation/game and [found] this one available."

Satisfaction with the use of the games was high. Out of 142 reports received, 115 indicated they would use the game again; 18 indicated they would use the game again with some qualifications or under different circumstances; four said they would not use the game again.

Game Objectives and Evaluation

In an assessment of the 11 games receiving three or more reports, participants indicated that the objectives provided as part of the game were achieved by their students. Fifty-six of the 64 respondents indicated that "some students achieved some objectives" or "most students achieved most objectives."

In evaluating student outcomes, respondents indicated that the most

frequently used techniques were observational. The more traditional types of evaluation, such as paper and pencil tests, were ranked considerably lower than the observation methods.

Expected and Achieved Outcomes

Respondents were given a list of 19 student outcomes which might be achieved in the use of simulation/games. They were also given a list of 12 teacher outcomes. Seven student outcomes and five teacher outcomes consistently received high priority ranking as desirable outcomes in the use of simulation/games.

Respondents were then asked to indicate which of these outcomes they felt had been best achieved. Data on student outcomes for the three games for which the most reports were received--*Ghetto, Dangerous Parallel,* and *The Game of Farming*--are reported. In *Ghetto* and *Dangerous Parallel,* three of the outcomes which one-half or more of the teachers responding felt had been achieved had also received high priority ranking as desirable outcomes in the use of simulation/games. Two of the high priority outcomes for games in general were achieved by students in *The Game of Farming*. Students "enjoy themselves" was an achieved outcome in all three games, although it did not receive high priority as a desirable outcome.

Three of the five high priority teacher outcomes were reported as achieved by well over 50 percent of the respondents; these were "teaches this material more efficiently than possible by another method," "involves more students," and "provides variety (change of pace) for students." "Reaches non-verbal students" and "reaches bright underachievers" were listed as high priority outcomes and were each reported as achieved by about 45 percent of the respondents.

Range of Use

Respondents reported on the grades in which games were used and the courses for which they were used. Responses to these items indicate that all of the 11 simulation/games receiving three or more reports were used at more than one grade level. The narrowest range of use was at two grade levels (*Caribou Hunting,* grades 5 and 6) and the widest range was at seven grade levels (*Dangerous Parallel,* grades 6 through 12).

Respondents also reported that all of the free-standing games (not part of a larger curriculum package) were used in at least four different course titles, with one game (*Ghetto*) being used for ten different course titles.

Conclusions and Recommendations

Potential Advantages of Simulation/Games

Many teachers, including most of those in this survey, have found simulation/games to be of interest and promise for a variety of reasons, including the achievement of a number of objectives for student learning that might not be reached easily by other methods. These objectives include the development of desirable attitudes, of empathy, of more integrated and realistic views of the subject matter, and of critical thinking ability. Teachers have also found that simulation/games can facilitate the achievement of their classroom objectives, including greater efficiency in teaching some subject matter, reaching non-verbal students, bringing out under-achievers, and getting greater student involvement.

In view of the results achieved thus far, of which this study provides a sample, we believe that many more teachers would find it worth their while to explore the possibilities of using simulation/games.

Cooperation

In many cases simulation/games are more difficult to use than other curriculum materials, such as textbooks. Simulation/games may require substantial search and preparation time by the teacher; they may be expensive; they may require arrangements of school time or school space that do not match usual school routines.

These difficulties can be reduced substantially by cooperation among teachers and between teachers and administrators. Teachers can share information about new simulation/games and about their experiences in using them; and they can share expensive game equipment. Administrators can facilitate experimentation with simulation/games by making special funds available, by helping teachers arrange for flexible time and space requirements, and by requiring experimenting teachers to make good reports of their experiences to their colleagues.

Information

Both individually and cooperatively, teachers can seek out the most useable sources of information about the characteristics, successes, and failures of particular simulation/games that might meet their needs. Some of the most useful sources are:

Simulation/Games in the Social Studies: What Do We Know? By Katherine Chapman, James E. Davis, and Andrea Meier. Boulder, Colo.: Social Science Education Consortium, Inc. and ERIC/ChESS, 1974. Publication #162. This is the first report in a series of three, of which the report you are reading is the third.

Guidelines for Using a Social Simulation/Game. By Katherine Chapman. Boulder, Colo.: Social Science Education Consortium, Inc. and ERIC/ChESS, 1974. Publication #163. This is the second report in a series of three, of which the report you are reading is the third.

Learning With Games: An Analysis of Social Studies Educational Games and Simulations. Edited by Cheryl L. Charles and Ronald Stadsklev. Boulder, Colo.: Social Science Education Consortium, Inc. and ERIC/ChESS, 1973. Publication #150. This document contains analyses of 70 social studies simulation/games for use with elementary and secondary students.

The Guide to Simulation/Games for Education and Training. By David W. Zuckerman and Robert E. Horn. 2d ed. Lexington, Mass.: Information Resources, Inc., 1973. This guide provides brief descriptions of over 600 games and simulations.

Simulation/Gaming/News. This newsletter is published six times a year at a subscription rate of $6.00 per year. It includes a variety of articles, advertisements, and graphic effects. Available from *Simulation/Gaming/News*, Box 3039, University Station, Moscow, Idaho 83843

For those who wish to obtain more extensive information about simulation/games, the citations given above supply many additional references.

Evaluation

One of the greatest needs in the area of simulation/games is for more

and better evaluation procedures. Standardized and teacher-made tests may be fairly adequate for measuring cognitive outcomes of simulation/games. But many of the desired and expected outcomes of simulation/games are non-cognitive. The state of our knowledge about measuring non-cognitive learning is not very advanced, whether we are concerned with the objectives of simulation/games or with other educational experiences. Perhaps an emphasis on evaluating the results of using simulation/games would provide a fruitful focus for persons concerned with the measurement of non-cognitive objectives.

Publishers of simulation/games should play an important role in the development of evaluation methods, but the task should not be left entirely to them. Teachers should continue to develop their own devices, and should be much more active in exchanging their findings. Finally, researchers should find the development of measures of non-cognitive objectives in the context of simulation/games a promising challenge.

APPENDIX A. PARTICIPANTS

California

William R. Baxter, Alisal High School, Salinas
John Bernardi, North Salinas High School, Salinas
Robert C. Bilek, Alisal High School, Salinas
Patricia V. Craige, Carmel Middle School, Salinas
Arthur H. Gilbert, Alisal High School, Salinas
Donald G. Harden, North Salinas High School, Salinas
Porter R. McLaughlin, Alisal High School, Salinas
Mauro Naccarato, North Salinas High School, Salinas
Wilmalee J. Schlentz, Alisal High School, Salinas
John Vanni, North Salinas High School, Salinas

Colorado

Lois M. Bostrom, Crest View Elementary School, Boulder
Mary K. Buckius, Scott Carpenter Junior High School, Westminster
Mary Lou Davis, Scott Carpenter Junior High School, Westminster
Douglas I. Gustin, Clear Lake Junior High School, Westminster
Bonnie Jean Harms, Casey Junior High School, Boulder
George E. Hoos, Fairview High School, Boulder
Myrna Horowitz, Berkeley Gardens School, Westminster
Esther Houser, Flatirons Elementary School, Boulder
Robert L. Logsdon, Ranum High School, Westminster
Charen L. Martinez, Shaw Hights Junior High School, Westminster
Philip Moss, Clear Lake Junior High School, Westminster
Benarda Melson, Hodgkins Junior High School, Westminster
Theresa Koontz Noland, Ranum Senior High School, Westminster
Ruth W. Royter, Mesa Elementary School, Boulder
Cheri Shadid, Shaw School, Westminster
Tom Strong, Clearlake Junior High School, Westminster
Richard Wilkinson, Clear Lake Junior High School, Westminster

Georgia

Larry C. Berry, Palmetto High School, Palmetto
Sandra W. Bramlett, Roswell High School, Roswell

Thelma Davis, Ridgeview High School, Atlanta
Virginia Mae Dykes, North Springs High School, Atlanta
William H. Hays, Riverwood High School, Atlanta
David M. Hill, Ridgeview High School, Atlanta
Martha J. Huey, Roswell High School, Roswell
Mrs. Mazie S. McCain, Riverwood High School, Atlanta
Mrs. Frances J. McKibben, Ridgeview High School, Atlanta
Barbara J. Rachels, Palmetto High School, Palmetto
Dorothy W. Shaw, Palmetto High School, Palmetto
Joyce M. Smith, Eva Thomas School, College Park
Philip Thomas, Milton High School, Alpharetta
Mrs. Rosemary S. Youmans, Russell High School, East Point

Kentucky

Robert T. Adkins, Madisonville-North Hopkins Senior High School, Madisonville
Talbott Randolph Allen, Jr., Durrett High School, Louisville
H. Dale Carrier, Parkland Junior High School, Louisville
R. David Covert, Southern High School, Louisville
Donald Lee Craig, Southern High School, Louisville
R. L. Crutcher, Pleasure Ridge Park High School, Louisville
Terry L. Fleshman, New Albany High School, New Albany
Mrs. Sara Haile, Shawnee High School, Louisville
Kathleen T. Hamfeldt, Fern Creek High School, Fern Creek
Barbara A. Howard, Iroquois High School, Louisville
Jay Levine, Louisville Male High School, Louisville
Eugene H. Minton, Atherton High School, Louisville
Gregory L. Rhodes, Southern Jr. High School, Louisville
Ann F. Sharp, Myers Middle School, Louisville
Mrs. Sherleen Sisney, Ballard High School, Louisville
Sarah Smith, Tates Creek Elementary School, Lexington
Robert D. Strong, Noe Middle School, Louisville
Courtney Terrill, Tates Creek Elementary, Lexington
Nancy A. Weber, Myers Middle School, Louisville

Maryland

Sara F. Anderson, Central Senior High School, Seat Pleasant
Joseph Bilinski, Stephen Decatur Junior High, Clinton
Neva Jean Caldwell, Robert Frost Elementary, New Carrollton
Mrs. M. Katherine Clausen, Greenbelt Center Elementary, Greenbelt
Allen C. Cox, High Point High School, Beltsville
Crawford Guinn Coyner, Bowie Senior High School, Annapolis
Bartholomew C. Fuerst, Suitland Senior High School, Suitland
Brian Scott Giersch, James Madison Junior High School, Upper Marlboro
Robert Leo Graves, Parkdale Senior High School, Riverdale
Ken Haak, Central Senior High School, Seat Pleasant
Helene Hendricks, Friendly Senior High School, Oxon Hill
Larry C. Martin, Friendly Senior High School, Oxon Hill
Ruby G. Macon, Robert Frost Elementary, New Carrollton
George M. McGarry, Laurel Senior High School, Laurel
Eoline A. Oelschlager, Robert Frost Elementary, New Carrollton
F. Harold Schriver, Clinton Center, Clinton
Michael R. Theis, Laurel Senior High School, Laurel
Joan M. Welsh, Carrollton Elementary School, New Carrollton

Minnesota

Robert Cuthbertson, East Junior High School, Minnetonka
Leutitia Ann Englin, Forest Elementary School, Crystal
Michael R. Humrickhouse, East Consolidated School, St. Paul
Thomas W. Keljik, Marshall-University High School, Minneapolis
Patrick B. Kidder, North Junior High School, St. Cloud
James Kyle, Armstrong High School, Plymouth
Charles Mykleby, L. H. Tanglen Elementary School, Hopkins
Lanny Orning, Cooper Senior High School, Minneapolis
Ken Rood, Oak Grove Junior High School, Bloomington
Gary Skarsten, Braham High School, Braham
Charles R. Skinner, Highland Senior High School, St. Paul
Carole A. Stockman, Oak Grove Junior High School

Oregon

Beverly R. Hamby, McMinnville Junior High School, McMinnville
Don Hogan, McMinnville Junior High School, McMinnville

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Nebraska

Robert E. Barrett, East High School, Lincoln

Roger D. Breed, Everett Junior High School, Lincoln

Vern Burling, Northeast High School, Lincoln

Mary M. Byington, Pius X High School, Lincoln

Thomas P. Douglas, Southeast, Lincoln

Carolyn Gray, Meadow Lane School, Lincoln

Helen L. Hart, Lincoln Southeast High School, Lincoln

Shirley Linderholm, Dawes Junior High School, Lincoln

Waldon N. McNaught, Lincoln Southeast Senior High School, Lincoln

Dwain Myers, Lincoln East High School, Lincoln

Mrs. Gretchen Olberding, Chas Culler Junior High School, Lincoln

Donald E. Patty, School District 145, Waverly

Kenneth Rippe, East High School, Lincoln

David Rutledge, Eastridge, Lincoln

Margaret Sievers, East High School, Lincoln

Gerald Taucreti, Northeast High School, Lincoln

Hugh Daniel Troshynski, Lincoln East High School, Lincoln

Sue L. Van Horn, Lincoln Southeast High School, Lincoln

Mildred C. Webert, Lincoln East High School, Lincoln

09054

APPENDIX B. QUESTIONNAIRES

Included in this appendix are the three forms used by the participating teachers to provide feedback on the use of simulation/games in the classroom.

--Group A teachers used "embedded" games and filled out pages 1 to 10 of the questionnaires *Use and Placement of a Simulation/Game in the Curriculum* and provided anecdotal material.

--Group B teachers used "free-standing" games and filled out pages 1 to 10 of the questionnaire *Use and Placement of a Simulation/Game in the Curriculum*.

--Group C teachers used "free-standing" games and filled out pages 1 to 7 of the questionnaire *Use and Placement of a Simulation/Game in the Curriculum*, used *Guidelines for Using a Simulation/Game*, and provided anecdotal material.

Included in this appendix is the overview of the project sent with the questionnaires.

09055

AN OVERVIEW OF THE PROJECT:

INTEGRATING SIMULATION/GAMES INTO SOCIAL STUDIES CURRICULA: AN ANALYSIS

James E. Davis and Katherine Chapman, Co-Directors

General Purposes

1. To collect information, both analytical and anecdotal, on the use of simulation/games in social studies classrooms

2. To develop "guidelines" for optimal use of a simulation/game in the classroom, derived from research, the present state of "conventional wisdom," and feedback from teachers

3. To present this information in such final forms as to be useful to both teachers and to those in leadership positions in the field of social studies education

4. To focus on non-computer commercially available simulation/games intended for use in grades 5 through 12

Approach

1. Review literature and classroom research on simulation/game development and use in the social studies (completed)

2. Design "field test;" find "contact" people around the country who will find teachers to participate (in process)

3. Design field test instruments (in process)

   a. Write first drafts; critiqued by local teachers (in process)

   b. Revise; critiqued by field "contact" people

   c. Revise again; mail to participating teachers

4. Analyze completed questionnaires, which are:

   a. Teacher background information

   b. Use and placement of a simulation/game in the curriculum

   c. Guidelines for using a simulation/game

Products

1. Manuscript - theory and research on simulation/games in social studies classrooms, based on literature review

2. Manuscript - findings from field test (such as teachers' purposes in using simulation/games, how games are integrated with other curricular activities, results from using games)

3. "Guidelines" for optimal use of a simulation/game (which will have been used and critiqued by some participating teachers)

November 1972

090:6

TEACHER BACKGROUND INFORMATION

1. Your name _____

2. City _____

3. Your school _____

4. Your school's phone number and address _____

_____

5. Grade level(s) you teach _____

6. Subject(s) you teach _____

7. What have been your sources of information concerning simulation/games?

_____ District resource center or consultant

_____ College or university course(s)

_____ Workshop(s) or teacher institute(s) specifically dealing with simulation/games. (If you check this source, below indicate how much time you have spent, all together, in such workshop(s) and institute(s).)

_____ hours OR _____ days OR _____ weeks

_____ Other workshop(s) or teacher institute(s), not specifically dealing with simulation/games

_____ Journal articles

_____ Books on simulation/games and gaming

_____ Talking with colleagues

_____ Other (describe briefly) _____

_____

8. In the list below, check each simulation/game that you have used in the classroom. Put an X by each game you have used just once, and two XX's by those you have used more than once.

_____ Abolition

_____ American Government Simulation Series

_____ American History Games

_____ Consumer

_____ Crisis

_____ Dangerous Parallel

_____ Democracy

_____ Destiny

_____ Dig

_____ Disunia

_____ Division

_____ Economic Systems

_____ Edge City College

_____ Extinction

_____ Family Life Income Patterns

_____ Generation Gap

_____ Ghetto

_____ Inner-City Planning

_____ Inter-Nation Simulation

_____ Life Career

_____ Napoli

_____ New Town

_____ Plans

_____ Pollution, Negotiating a Clean Environment

_____ The Redwood Controversy

_____ 1787

_____ Star Power

_____ State Legislator

_____ Stocks and Bonds

_____ They Shoot Marbles, Don't They?

_____ Tracts

_____ The Union Divides

_____ Yes, But Not Here

_____ Bottleneck

_____ The Game of Market

_____ Market

_____ Armada

_____ Empire

_____ King vs. the Commons

_____ Farming

_____ Metfab

_____ Point Roberts

_____ Portsville

_____ Section

_____ Caribou Hunting

_____ Seal Hunting

_____ Resources and Arms

Below list the names of all other simulation/games you have used in the classroom. Put an X by each game you have used just once, and two XX's by those you have used more than once.

___a._____ ___d._____

___b._____ ___e._____

___c._____ ___f._____

9. Do we have permission to list your name and the name of your school in our final reports?

_____Yes _____No _____

Your Signature

Simulation/Games Project
ERIC Clearinghouse for Social Studies/Social Science Education

November, 1972

USE AND PLACEMENT OF A SIMULATION/GAME IN THE CURRICULUM

Your Name _____ City _____

Name of game*** _____ Title of course in which game used _____

To the teacher. More and more teachers are using simulation/games in social studies instruction. However, not much is known about what happens when you mix together one teacher, one game, and a roomful of students. We are asking over 100 teachers from around the country, yourself included, to describe and explain this experience. From your responses, we hope to learn more about the great variety of ways that games are used, and more about how to use games to their best advantage in the classroom. We plan to write up the results of this study and disseminate them in such a way that they will be easily available to teachers and others in the profession. Thank you very much for your willingness to help with this project by completing these questionnaires.

James E. Davis and Katherine Chapman, Co-Directors
Simulation/Games Project
Educational Resources Center
855 Broadway
Boulder, Colorado 80302

Instructions. The following questions ask you how you used the simulation/game (the name of the game you have written on the top of this sheet) in your classroom, what your expectations were about the experience, and what actually happened. The questions require different types of answers, e.g., a one-word response, checking the appropriate answer, or writing a couple of sentences. Please answer all questions that apply to your situation.

***If this is not a commercially available game, please describe the game on the back of this sheet, give the author(s), and tell us how we can get a copy of the game.

1. What grade level(s) were the students who played the game? (If students were more than one grade level, give the approximate proportion of students at each level.) _____

2. Usually, the instructions for a game recommend that it is best to play with a group of a certain size. How large a group played together in your classroom, in relation to the recommended number?

   _____ The group was smaller than recommended

   _____ The group was within the recommended range

   _____ The group was larger than recommended

   _____ No recommendation is given

3. Who played the game?

   _____ The entire class

   _____ Just part of the class

   If only part of the class played, how were the players chosen?

4. Who actually "ran" the game?

   _____ I did (the teacher)

   _____ One or more students did

   If the game was run by a student(s), how was he/they chosen?

5. We would like to know roughly how much experience these students have had in playing simulation/games. Please take a show of hands (How many have never played a simulation/game before? How many have p' ved one or two games before? Three to five? Six or more?), and give us a rough average on the number of games these students have played before. (If you can supply a more precise average-number-of-games played, we would appreciate getting it.)

   _____

   _____

6. How many times have you used this game before?

____Never ____Once ____Twice _____More than twice

7. Did you play the game yourself prior to the first time you used it in the classroom?

____ Yes ____ No

If "yes," did you:

____ play the game all the way through

____ play just a lead-in or training section

8. How much time was spent in:

	Classroom Periods
a. In-class preparation	_____
b. Actual game play	_____
c. Debriefing the game	_____
d. Follow-up activities	_____

9. Sometimes the instructions recommend that a game be played a certain number of times (e.g., twice) or a certain number of rounds (e.g., seven rounds is optimal). How many times or rounds did you play in relation to the recommended number?

____ No recommendation is given

____ The number of times or rounds played was within the recommended number

____ The number of times or rounds played was fewer than the recommended number

____ The number of times or rounds played was more than the recommended number

If the number of times or rounds you played was fewer or more than the recommended number, please explain why you did not follow the recommendation.

10. Below describe any (other) departures you made from the game instructions as given.

(LOOK OUT! HERE COME THE HARD QUESTIONS!)

11. Sometimes a list or statement of objectives is provided with a game. If objectives are provided with this game, on the scale below rate the degree to which you think the stated objectives were achieved by your students. If no objectives are provided, write "none" below.

_____1. All students achieved all objectives

_____2. Most students achieved most objectives

_____3. Some students achieved some objectives

_____4. A few students achieved a few objectives

_____5. No students achieved any objectives

12. Apart from the general objectives provided with the game (if any), what were your special objectives in using this game? Please list your most important objectives on the lines below, on the left. To the right of each objective, rate the degree to which you think the objective was achieved in your classroom.

Degree of Success
In Achieving Objective

Total Failure — 50-50 — Total Success

a. _____

b. _____

c. _____

d. _____

e. _____

Instructions for Questions 13 and 14:

1. Question #13 is a list of possible outcomes for students from an experience with a simulation/game. First, read the entire list.

2. Rank order these possible outcomes in terms of how important they were to you when you chose to use this game. Do this in the blanks on the left, under "Purposes: Intended Outcomes."

   a. Write "1" in front of your most important purpose in using this game, "2" in front of your second most important purpose, and so on.

   b. If a stated purpose was not relevant to you in choosing this game, write "0" in the blank.

3. Re-read the list of possible outcomes and pick those five you consider to be the five most important actual outcomes (of those listed) from your experience with this game. Put a check in the blanks to the right of these five outcomes, under "Actual Outcomes."

4. Question #14 is a list of possible outcomes for the teacher from using a simulation/game. Read this list of possible outcomes, and follow the same procedures as you did for Question #13.

13. Outcomes for students, who:

Purposes: Intended Outcomes (rank in order of priority)		Actual Outcomes (check five most important)
_____	1. Learn certain facts	_____
_____	2. Develop or alter certain attitudes	_____
_____	3. Gain a more integrated and whole view of the subject matter of the simulation/game	_____
_____	4. Make judgments about value questions involved in the simulation/game	_____
_____	5. Are more involved	_____
_____	6. Develop empathy for people in roles they play	_____
_____	7. Practice cooperation	_____
_____	8. Practice competition	_____
_____	9. Are more enthusiastic about the subject matter of the simulation/game	_____

_____ 10. Are more motivated _____

_____ 11. Gain a more realistic view of the subject matter of the simulation/game _____

_____ 12. Are better able to remember material learned prior to the simulation/game _____

_____ 13. Enjoy themselves _____

_____ 14. Have the chance to seek and find as many solutions to the problem presented as possible _____

_____ 15. Improve their strategic thinking abilities _____

_____ 16. Increase their sense of control over the environment _____

_____ 17. Are stimulated to ask questions _____

_____ 18. Pay more attention _____

_____ 19. Spend less time listening and more time "doing" _____

14. Outcomes for the teacher, who:

Purposes: Intended Outcomes (rank in order of priority)		Actual Outcomes (check five most important)
_____	1. Teaches this material more efficiently than possible by another method	_____
_____	2. Checks how much the students have learned on the subject up to this point	_____
_____	3. Reaches his non-verbal students	_____
_____	4. Reaches his bright underachievers	_____
_____	5. Reaches his slow students	_____
_____	6. Involves more students	_____
_____	7. Provides variety (change of pace) for his students	_____
_____	8. Escapes the role of judge and critic	_____
_____	9. Provides an enjoyable interlude for his students	_____
_____	10. Rewards students for earlier behavior or achievement	_____
_____	11. Identifies important behavior patterns, such as "non-participant," "leader," "obstructionist," etc.	

(WE BET YOU'RE GLAD THOSE ARE DONE!)

15. Did any out-of-class or out-of-school student activity develop spontaneously in connection with the game ("wheeling and dealing" in the corridors or on the phone, group strategy meetings, etc.) that you know of?

_____Yes _____No

If you checked "yes," please describe briefly.

16. Check the ways you used to determine what students learned from the game.

_____ A test that came with the game
_____ A test that I made up
_____ Students' responses during debriefing discussion(s) and activities
_____ Watching and listening during the game play
_____ Students' final scores in the game
_____ General observation of students' behavior during and after the game
_____ Other (describe briefly)

17. If you could, would you use this game again?

_____ Yes _____ Yes, with qualifications or under different circumstances _____ No

If you checked "Yes, with qualifications or under different circumstances", describe what you mean. If you checked "No", explain why not.

18. If the game was used as part of a unit or mini-course (or of some other longer curriculum sequence), where in the sequence did you use the game? (For example, at the beginning; one-third of the way through.)

_____

19. Was there anything about the game, itself, that suggested you should schedule it when you did?

_____ Yes _____ No

If "Yes", please describe.

20. For what (other) reasons did you schedule the game at the time that you did?

21. If you used the game as part of a unit or mini-course, would you use this game as part of this same unit or mini-course again, if you could?

_____ Yes _____ No

If you checked "Yes", would you schedule the game at about the same place in the unit? Why or why not?

If you checked "No", why wouldn't you use this game with this unit again?

22. If the game was used as part of a unit or mini-course, we would like to know the main objectives of the entire unit or mini-course. If available, please send us a copy of the unit or course description. If no such description is available, please list the main objectives of the unit or course below.

Unit or course title: _____

a. _____

_____

_____

b. _____

_____

_____

c. _____

_____

_____

d. _____

_____

_____

e. _____

_____

_____

The game was used as an aid in attaining which of these objectives? On either the course description which you enclose or on the list above, put a check by each objective which applies, if any.

23. Why did you select this game?

_____ You knew from using it before that it works well

_____ It was sitting on the shelf so you felt you should use it

_____ Someone told you about it so you decided to try it

_____ Someone (e.g., principal, social studies consultant, fellow teacher) talked you into using it

_____ You wanted to use a (any appropriate) simulation/game and, when you checked, this one was available

_____ You wanted to use this specific game and you made a point of getting it

_____ Other (describe)

(ONLY A COUPLE PAGES TO GO)

24. Is this game part of a set of accompanying material? (E.g., "Farming" is part of a High School Geography Project unit, "Market" is part of an Elementary Economics Project unit.)

_____ Yes _____ No

If "Yes", why aren't you using the accompanying material?

If "Yes", how many times have you used the accompanying material?

_____ times

Anecdotal Material

In answering the preceding questions, you have given us a great amount of information regarding the experience of using this game with your students. However, much of this information is rather cut and dried. We would also like to capture some of the flavor of this experience--be it exciting, chaotic, boring, explosively creative, mundane, what-have-you. There are many ways you might do this, and we leave it to you to choose your own way of communicating this to us. You might loan us a videotape of students playing the game, send an audiotape of the debriefing discussion, send us copies of student-generated game or game-related materials (e.g., score sheets, newspapers, evaluations of the game experience, art work), or write a short essay (100 to 300 words) describing the game experience. If you write an essay, it would be helpful if you described in detail at least one colorful anecdote (occurrence, dialog, etc.). Thank you.

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Your Name | City | Name of Game

GUIDELINES FOR USING A SIMULATION/GAME

Instruction. These Guidelines for optimal use of a simulation/game in the classroom come in two parts. The first part presents, in outline form, the general teaching/learning approach that underlies simulation/games. In a sense, this is the "philosophy of education" that is incorporated into a good simulation/game. The presentation includes a description of the expected teacher role, which we hope will guide your "teacher" behavior as you use the game in your classroom.

To a considerable extent, the success of a simulation/game depends on maintenance of the appropriate teaching/learning atmosphere during all activity related to the game. A teacher who feels he cannot establish and maintain the teaching/learning situation described is not apt to have real success with simulation/games in his classroom. Please read this first part and answer the evaluation questions at the end.

The second part of these guidelines provides step-by-step guidance for using a game. Please follow these steps as closely as you find practicable. However, you may skip steps and add others of your own. If you add a step, please describe what you did in the space provided at the end of each section.

You are asked three questions about each step, which you should answer as you go along. First, we want to know whether you did the step. In the first space on the left, check each step that you do. Leave the space blank if you do not do the step and, in the "comments" space on the right explain why you skipped the step.

Second, we want your judgment on the importance of each step--whether or not you do the step yourself. This is the "evaluation score," and should be written in the second space on the left.

The evaluation scale runs from "1" to "4," and is printed at the top of each page. A "1" means you consider this step "very important," that is, it is always or almost always necessary to do this step and, if you skip this step, the consequences are dreadful. A "2" means you consider this step "important," that is, it is a good idea to do the step and, if you skip the step, there will be some negative consequences for the success of the game with your students. A "3" means you consider this step to be "of some importance," that is, following through with this step probably makes things go more smoothly but, if you skip the step, the game will still be successful. A "4" means you consider this step "unimportant," that is, this step is unnecessary and unrelated to the success of the game.

Third, we want to know when you think a step is unclear or confusing. In the third space on the left, check any step you find unclear. If you can explain your confusion, or think we should say more about the step in the "notes," describe what you have in mind in the "comments" space.

Simulation/Games Project
Educational Resources Center
855 Broadway
Boulder, Colorado 80302

I. Introduction

A. A teacher may use a simulation/game to "provide variety" or "get students involved," but his other expectations probably mostly focus on learning of "content"

B. Research shows that "content" is not learned any better through simulation/games than by other methods (as measured by standard paper-and-pencil tests)

C. Simulation/games combine intellectual tasks and skills with a general teaching/learning approach

D. Both research and anecdotal information suggest that the primary values of a simulation/game experience are in the realm of teaching/learning behaviors

E. Going through actions without a feel for the spirit (in this case, the teaching/learning approach) produces hollow results

II. General Approach

A. Most of what happens during a simulation/game is a combination of intellectual operations and interpersonal relations: content and process are interwoven

B. Players in a simulation/game create a "shared reality" by their interaction; one task is to articulate and reflect upon this "shared reality"

C. This "shared reality" is composed of the unique experiences of each participating individual; another task is to help each player articulate and reflect upon his own personal learnings

D. Because what happens in the simulation/game is created by the particular individuals playing the simulation/game, there is always some degree of unpredictability about the outcomes (B and C above)

a. The more open-ended the simulation/game, the more unpredictable player behavior is

b. The more open-ended the simulation/game, the more improvisation is required of both teacher and students

III. What is being learned

A. The most common "activity" in simulation/games is decision-making; the player must consider a set of information (both available and missing), make a decision, and carry through a commensurate action

B. Most often simulation/games focus on interrelationships among facts, values and/or events (rather than on discrete facts or on one-to-one relationships)

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C. To the extent a simulation/game is based on strategic thinking, i.e., outcomes are dependent upon players' decisions and behaviors, rather than on chance, it fosters in players a sense of self-direction, i.e., what happens to me is the result of my own choices

D. To the extent a player perceives the relationships among facts, values, events and his own decisions and behaviors in the simulation/game, he experiences the world as being rational (explainable, understandable)

E. To the extent a simulation/game encourages alternative behaviors and these are explored by players, the simulation/game fosters divergent (rather than convergent) thinking in players

F. Many simulation/games involve "content" that cuts across the lines of traditional disciplines

G. The "shared reality" created in the classroom via a simulation/game reflects an external reality

   a. Both the classroom "shared reality" and the external reality it reflects are important and valid topics for consideration in the classroom

   b. The classroom "shared reality" provides a perspective on external reality from which players can legitimately question the "oughtness" of external reality

H. Some simulation/games raise value questions, which must be considered natural and appropriate topics for consideration in the classroom

I. In some simulation/games, players engage in such interpersonal behaviors as conflict resolution or management, manipulation and resisting manipulation, decision-making-by-negotiation, and handling power conflicts. Students must be willing and able to engage in such behaviors, the teacher must have the skill to help students learn and practice such behaviors, and the learning and use of such behaviors in school must be considered important and legitimate.

J. Emotional involvement and expression (within the usual social bounds) are a natural and legitimate concommitant of learning in a simulation/game.

K. Simulation/games vary greatly in how much they incorporate the teaching/learning approach described here. Games may vary along several important dimensions and, in general, the closer they are to the left-hand end of each dimension (below), the more they incorporate this teaching/learning approach.

Open-ended role play vs. No role identification

Consequential decision-making vs. Chance

Definition of roles, resources, and payoffs in "quality" terms vs. Definition of roles, resources, and payoffs in "quantity" terms

Challenging (challenging amount of information to be handled to play intelligently) vs. Simple-minded

Freedom of behavior (alternative behaviors allowed and rewarded) vs. Restricted behaviors

IV. Roles and Behaviors

A. The roles and behaviors expected of the teacher and students during a simulation/game must be perceived as legitimate

B. The students and teacher have equal status (although they have different roles)

C. The teacher is counselor-consultant-facilitator-friendly critic-coach (rather than an authority). He:

a. facilitates natural group processes

b. guides this group energy so it aids the educational process

c. encourages discussion of motivations

d. calls attention to significant events

e. encourages analysis

f. encourages discussion leading to awareness of the shared reality created in the classroom

g. encourages each student, in his individual way, to find his own personal meaning from the simulation/game experience

D. The students:

a. are responsible for their own learning

b. are responsible for helping othe. students learn

E. The teacher is both a participant in the learning process and an observer

a. He serves as a model of how to be an observer-participant

b. Students also are both participants and observers

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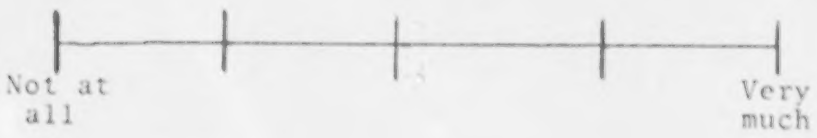
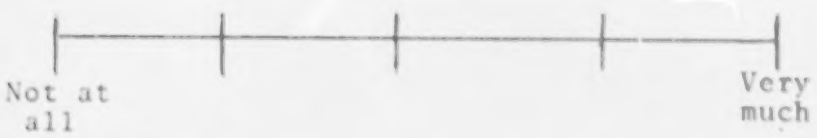
Below are three questions asking you to evaluate the first part, on simulation/games as a teaching/learning approach, of these Guidelines. Please answer all three questions.

1. On the scale below, indicate (by checking) how much this part helped you to understand the educational philosophy behind simulation/games.



2. On the scale below, indicate (by checking) how much this part helped you in using the simulation/game in your classroom.



3. Below indicate whether you think this part:

_____ should be retained as part of these Guidelines in pretty much the form it has here

_____ should be retained as part of these Guidelines but needs revision or changing

_____ is not a useful addition to these Guidelines

If you checked "should be retained as part of these Guidelines but needs revision or changing," describe what revisions or changes you think ought to be made.

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Check each step you do	Evaluation score	Check any unclear step

EVALUATION SCALE
1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

This space for comments. If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

I. Planning

A. Read all material.

Notes: While reading, watch for unclear rules and directions; be prepared to clarify them for students.

B. Decide how many games you need; decide the number of players/game. (See J on role distribution.)

Notes: It is advisable to follow the recommendations (if available) that come with the game.

C. If possible, play the game ahead of time.

Notes: The game can be played with adults but it may be helpful to play with a group of students from the class. These students then can be helpful during classroom play, e.g., put them in significant roles, or have them play a demonstration round.
If more than one group will be playing in the classroom at the same time, it is essential to have "pretrained" students in order to have one in each group.
As you play, get a feel for how hard it is to "get into" the game. (So you have some feel for how thoroughly you will need to go over rules with students before play begins.)

D. Review the amount and vocabulary level of reading required; decide how to provide students with any special help, if needed.

E. Review the level of arithmetic skills required; decide how to provide students with any special help, if needed.

Notes: Should you provide analogous practice problems ahead of time? Do some roles require better arithmetic skills? Can students who have trouble with arithmetic be paired with students who don't?

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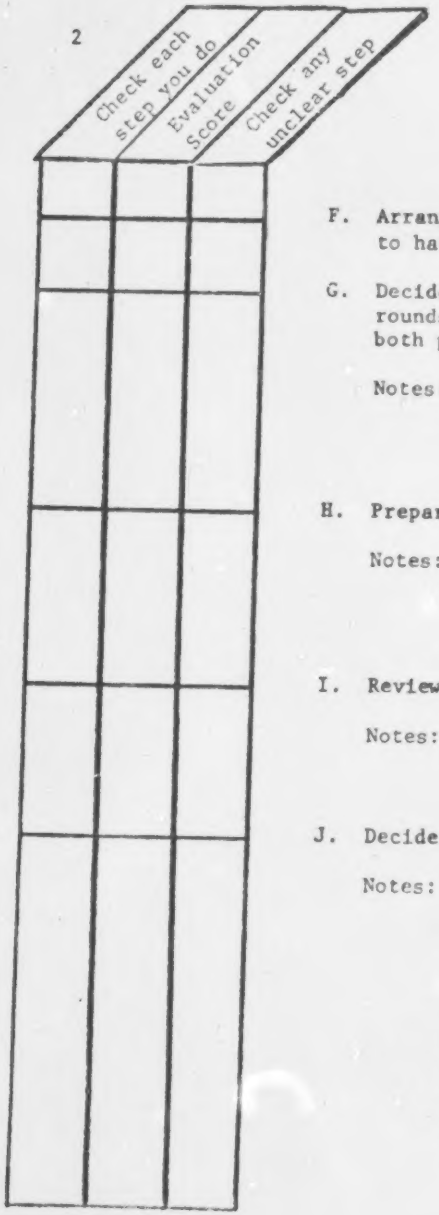

EVALUATION SCALE
1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

F. Arrange for any resource and reference materials you wish to have in the classroom or on reserve in the library.

G. Decide the number of times, or the approximate number of rounds, you plan to play, and allot the necessary time for both playing and debriefing.

Notes: It is advisable to follow the recommendations (if available) that come with the game.
If this is the first time you have used this game, or if it is a complex game, allot additional time.

H. Prepare and organize necessary materials

Notes: Be sure you have eve ything (cards, forms, etc.). When you estimate your needs for forms which must be duplicated, always over-estimate. You may wish to pre-sort materials for ease of distribution.

I. Review the physical arrangements required by the game.

Notes: Is there a lot of player movement? (You may need a larger room.) Does the furniture need to be rearranged? What is the best way to do this?

J. Decide how to distribute roles among players

Notes: For simple games, it is advisable to have each student play a separate role; for complex games and/or with large groups, it is advisable to pair or even team students. (Pairing or teaming -- in complex games -- speeds up the game; also, discussion of strategy by team-mates generally improves decision-making and increases learning.) If feasible, teams should be of mixed abilities. If each student plays a separate role, or students play in pairs, they generally perform better if allowed to chose their own role and team-mates. The value of playing a role yourself is that you become a learner with the

This space for comments.
If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

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3	Check each step you do	Evaluation Score	Check any unclear step

EVALUATION SCALE
1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

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students. However, usually it is advisable not to play because of the many tasks required of you during the game, especially during a complex game.

K. Optional. Distribute roles among players

Notes: Whether you distribute roles to players now or during the start-up depends on the complexity of the game, on your students, and on your own preferences. Given a complex game, you may wish to distribute roles now so players can begin to think in terms of their own roles; this will also speed your game start-up. Given a simple game, you may wish to distribute roles later so all players pay attention to all instructions and information.

WHAT ELSE DID YOU DO AS PART OF YOUR PLANNING THAT WAS USEFUL?

II. Pre-Game Activities

A. Decide how much introduction students need to the content ideas of the game, and provide such introduction if needed.

Notes: If the game is complex, try examining factors involved (ideas, processes) one or a few at a time. If possible, also examine how these factors fit together.

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Check each step you do	Evaluation Score	Check any unclear step

EVALUATION SCALE
1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

This space for comments. If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

B. Decide how much pre-game practice students need in the necessary interactive skills, and provide such practice if needed.

Notes: Interactive skills include role playing, debating, decision-making by negotiation, social conflict resolution, etc. Perhaps students can play a simpler game or engage in a simpler activity which calls on some of the same interactive skills.

WHAT OTHER PRE-GAME ACTIVITIES DID YOUR CLASS DO THAT WERE USEFUL?

III. Start-up

A. If students are not familiar with them, provide a general introduction to simulation/games.

Notes: Answer these questions: What is a game? What is a simulation? What are their purposes? What kinds of experiences can players expect to have in simulation/games?

B. Introduce this specific game

Notes: Describe purposes and main features of the game. Keep introduction as short as possible; the more complex the game and the less familiar students are with simulations, the longer it needs to be.

BEST COPY AVAILABLE

Check each step you do	Evaluation Score	Check any unclear step

EVALUATION SCALE
1. This step is very important
2. This step is important
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4. This step is unimportant

This space for comments.
If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

C. Distribute roles among players if you have not already done so.

D. Go over the rules with students

Notes: Emphasize operations; don't discuss strategy.
For simple games, players can begin without total understanding of the rules; for complex game, more care should be taken that players understand the rules before they begin. The value of information redundancy increases as the complexity of the game increases. (Complexity = amount of information player needs to operate intelligently.)
Display game hardware as you discuss rules; as you discuss forms, project them on an overhead or have a large mockup on which to demonstrate.

E. <u>Recommended option for complex games</u>. Play a practice round.

Notes: This round should not count in the scoring. You may have to abbreviate it. Debrief it.
Alternatively, you may have "pre-trained" students play a demonstration round.

WHAT ELSE DID YOU DO AS PART OF THE GAME "START-UP" THAT WAS USEFUL?

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Check each step you do	Evaluation Score	Check any unclear step

EVALUATION SCALE

1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

This space for comments.
If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

IV. Game Play

A. Maintain a supportive attitude

Notes: Review the first section of these Guidelines concerning the supportive, coaching teacher role. You should allow any behavior that is not disallowed within reason and the usual social norms. Remain neutral regarding students' strategies.

B. Be prepared for the unexpected; improvise.

C. Keep notes on the kinds of difficulties students have.

Notes: If the problem cannot be handled on the spot, later use your notes as the basis for discussing or solving the problem. Note problems that recur, or seem likely to recur. If the difficulty arises from a weakness in the game, you may have to change a rule or procedure. (If you change or add a rule, watch how it operates to be sure you solved the problem rather than compounding it.)

D. Keep anecdotal notes on significant bits of interaction which you observe.

Notes: During daily discussion or the debriefing, use these notes as a springboard, and as an aid in reconstructing events.

E. Keep players thinking about their own playing strategies and evaluating their own progress.

Notes: Encourage frequent discussion of what is happening. Ask such questions as: What information is important to you? Why? Of what use is it? How do the actions of other players affect you?

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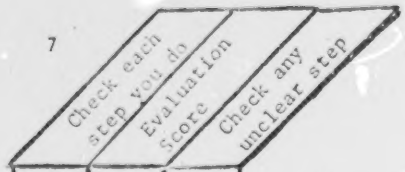

EVALUATION SCALE

1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

F. Keep posting scores (if available); use them as a springboard for comparing success of different strategies.

G. If applicable. Keep graphic records of progress.

Notes: If any data generated by the game can be put into graphic form, i.e., diagram, table, on an on-going basis, use this, too, as a springboard for evaluating progress.

H. Watch for evidence that a reasonable proportion of players become more intelligent in their playing strategies over time.

Notes: If players are not learning from their own mistakes, more direct coaching on your part might be called for.

I. If absenteeism threatens to disrupt progress, find ways to compensate.

Notes: Particularly in complex and long-range games, absenteeism can be disruptive. Assign a student from a player-pair or team to play the role of an absent student, or play the role yourself.

DESCRIBE HERE ANYTHING ELSE YOU DID DURING THE GAME THAT MIGHT BE A HELPFUL PART OF THESE GUIDELINES.

This space for comments.
If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

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Check each step you do	Evaluation Score	Check any unclear step

EVALUATION SCALE
1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

This space for comments. If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

V. Debriefing

Notes: Debriefing is when most players analyze their game experiences, generalize from these and the experiences of their classmates, and draw parallels between the simulation and reality. A game is an aborted learning experience without a debriefing. The more complex the game, the more time you should allot for debriefing. Debriefing discussions are, by nature, fluid and open-ended. Your approach should fit your own teaching style and the response patterns of your students. Except for Steps A and B being first, and Step G being last, the following do not have to be in the order given, and are not so much separate steps as they are related thoughts. These points all should be covered, but there is no "best" sequence for a debriefing, except for a general pattern of moving from game-specifics to reality-generalizations.

A. Discuss how students feel about the game; allow venting of positive and negative feelings, and discuss any unresolved disputes.

B Compare strategies of winning vs. non-winning players.

Notes: Have winning and some non-winning players describe their strategies (and compare scores). If appropriate, compare the scoring system with its comparable real-world reward system.

C. Compare logic of what happened in the game to what would happen in reality.

Notes: Use any data you have (your notes, graphs, scores, etc) and a history of events in the game. Have students explain differences between game occurrences and what would happen in reality.

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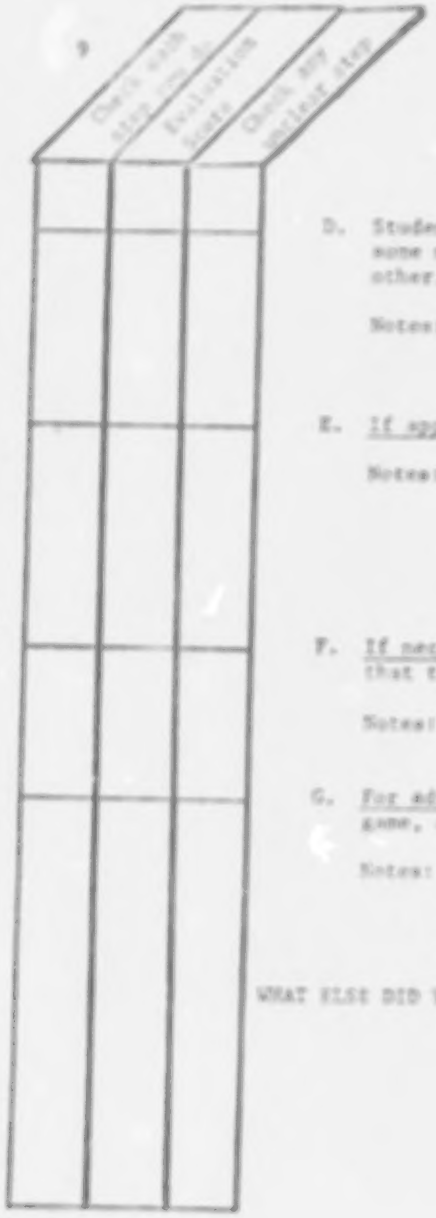

EVALUATION SCALE

1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

D. Students should articulate what they learned (can be by some method other than discussion) and share this with each other.

Notes: Did everyone learn the same things? What accounts for differences? Are these different perceptions real?

E. If applicable. Discuss value questions which arose.

Notes: In discussing values, two things are important: First, students should explain why they hold their values. Ask them what happened in the game, or what has happened to them in real life, that leads them to believe what they believe. Second, you should remain neutral.

F. If necessary. Compare the game with reality, to the extent that this has not been done sufficiently.

Notes: What matched? What didn't match? What was left out?

G. For advanced classes. Describe the model underlying the game, and evaluate it.

Notes: The model is the simplified pattern of reality that the game simulates. Ask such questions as: How "accurate" is the model? How could the model be improved? How could the game be improved?

WHAT ELSE DID YOU DO DURING YOUR DEBRIEFING THAT WAS USEFUL?

This space for comments. If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

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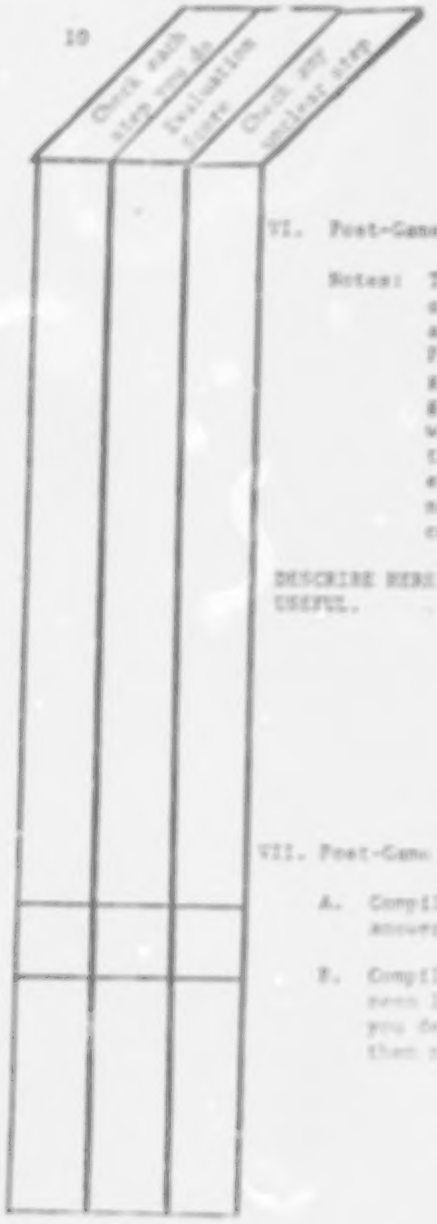

EVALUATION SCALE
1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

This space for comments. If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

VI. Post-Game Activities

Notes: These activities are to extend awareness and evaluation of the model underlying the game. In general, they are for advanced classes.
Perhaps project the system, i.e., the events of the game, into the future. Or create another simulation/game based on the same model. Or redesign the game with an improved model. Or investigate a case study that contrasts with the game model, e.g., another economic system, or that deals with the same decisions necessitated in the game, e.g., in another political context.

DESCRIBE HERE OTHER POST-GAME ACTIVITIES YOUR CLASS DID THAT WERE USEFUL.

VII. Post-Game Operations (Teacher)

A. Compile your own list of "commonly asked questions" and answers that seem to work.

B. Compile (or finish) a list of problems that arose that seem likely to arise in future plays of the game, and how you dealt with them -- or how you will try to deal with them next time.

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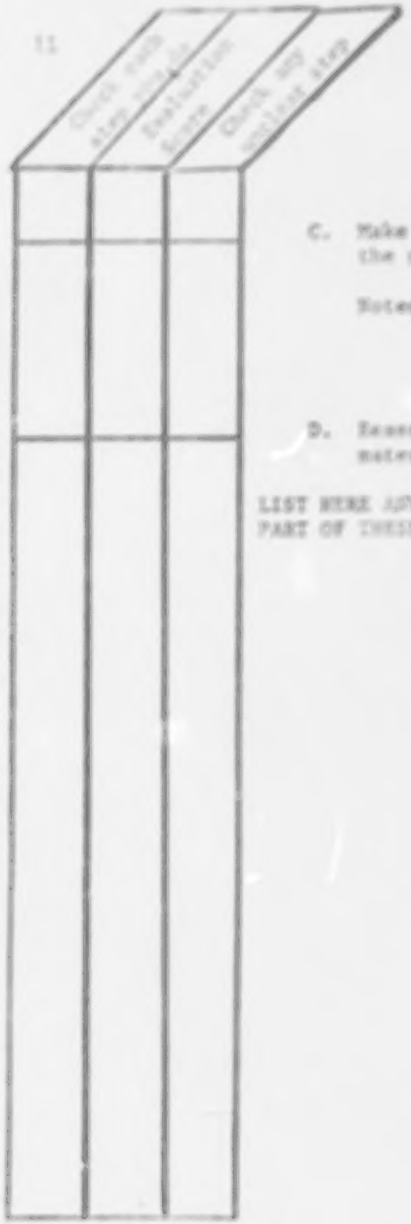


EVALUATION SCALE
1. This step is very important
2. This step is important
3. This step is of some importance
4. This step is unimportant

This space for comments. If you skip a step, please explain why. You may combine responses to related steps. If you need more space, use the back of the page.

C. Make records on any other information useful in planning the next play.

Notes: For example: (1) number of forms used, (2) how long the game and related activities took, (3) anything you learned to help with distributing roles.

D. Reassemble the game now, while used to handling the materials.

LIST HERE ANY OTHER POST-GAME OPERATIONS THAT MIGHT BE A USEFUL PART OF THESE GUIDELINES.

Below are three questions asking you to evaluate these Guidelines as a whole.

Please answer all three questions.

1. One the scale below, check how useful (helpful) you found these Guidelines.

2. Below indicate whether you found these Guidelines:

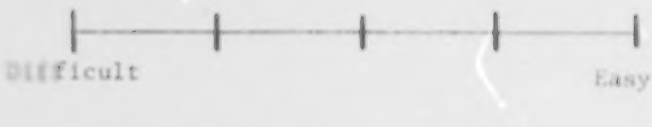
_____too long,

_____about the right length,

_____too short.

If you checked "too long," what do you recommend we take out? If you checked "too short," what do you recommend we add?

3. On the scale below, indicate how easy or difficult you think teachers will find these Guidelines to use.



APPENDIX C. SIMULATION/GAMES REPORTED ON IN STUDY

Alabama Literacy Test. Westminster, Colorado: Westminster Public Schools, Social Studies Unit III, Intolerance and Cultural Diversity.

**American History Games.*

American History Game: Colony. Chicago: Science Research Associates, 1970.

American History Game: Frontier. Chicago: Science Research Associates, 1970.

**Armada.*

Balance. Lakeside, California: Interact, N.D.

Baldicer. Richmond, Virginia: John Knox Press, 1970.

Basili. Available from Harry Stein, African-American Institute, 866 United Nations Plaza, New York, New York 10017.

**Bottleneck.*

**Caribou Hunting.*

Color of Man. New York: Random House, 1968.

Curfew. No further information available.

**Dangerous Parallel.*

**Democracy.*

**Destiny.*

**Dig.*

Diplomacy. Boston: Games Research, N.D.

Ecopolis. Lakeside, California: Interact, 1971.

**Empire.*

Enterprise. Lakeside, California: Interact, N.D.

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*For complete citation, see list of Promising Games in Appendix D.

*The Game of Farming.

*The Game of Market.

Ghetto. New York: Western Publishing Company, 1969.

Great Leaders Game. No further information available.

Group Decision. Developed by NASA. Also known as Concesus Seeking and Consensus.

Hard Rock Mine Strike. New York: Random House, 1970.

Hat in the Ring: The Presidential Nominating Game. In *Politics '72.* Washington, D.C.: Kiplinger Washington Editors, 1971.

The Haymarket Case. Developed by David Dal Porto, Mount Pleasant High School, San Jose, California. Unpublished.

House of Ancient Greece. Boston: American Science and Engineering, 1969.

*Inter-Nation Simulation.

Labor Management Simulation. No further information available.

Land Use Game. Middletown, Connecticut: Education Ventures, 1971.

Legislature. Teacher's own game. (An extensively modified version of *Napoli.*) John Vanni, North Salinas High School, Salinas, California.

Lifeboat. No further information available.

*Life Career.

Mahopa. Lakeside, California: Interact, N.D.

Marketplace. New York: Joint Council on Economic Education, N.D.

*Metfab.

Mission. Lakeside, California: Interact, 1969.

*Napoli.

Operation Bigger Beef. In *Geography in an Urban Age.* New York: Macmillan Company, N.D.

Panic. Lakeside, California: Interact, 1968.

Panzerblitz. Baltimore, Maryland: Avalon Hill, N.D.

Pit. Salem, Massachusetts: Parker Brothers, N.D.

A Plan for Hunting: Stalking the Paper Clip. In *Man: A Course of Study.* Washington, D.C.: Curriculum Development Associates, 1970.

The Planet Management Game. Boston: Houghton Mifflin Company, 1971.

Politician. Teacher's own game. (An amalgam of *Napoli* and *Democracy* for seniors.) James Kyle, Armstrong High school, Plymouth, Minnesota.

**Pollution: Negotiating a Clear Environment.*

**Portsville.*

Pursuit. Pleasantville, New York: Reader's Digest Services, 1970.

**The Redwood Controversy.*

Rutile and the Beach. In *Geography in an Urban Age.* New York: Macmillan Company, 1970.

**Seal Hunting.*

**Section.*

**1787.*

Sitte. La Jolla California: Western Behavioral Sciences Institute, 1969.

Society Today. Del Mar, California: Communications Research Machines, Inc., 1970.

Spanish American War. Santa Clara, California: History Simulations, N.D.

**Starpower.*

Stockmarket. Available from Jasper M. Rowland, 1545 Harmony Road, Akron, Ohio. N.D.

Stocks. No further information available.

Sunshine. Lakeside, California: Interact, 1968.

Superhighway: A Simulation Game. In *Instructor.* Vol. 80 (February 1971) pp. 94-5.

Survival. Monticello, Minnesota: Good Time Educators, N.D.

Takeover: Fait Accompli. Sherleen Sisney. Published in the Jefferson County Board of Education Curriculum, Kentucky.

**Tracts*.

Viet Nam: A Simulation Game. Anaheim, California: HRW Associates, 1969.

War and Peace: A Simulation Game. John D. Gearon. Published in *Social Education*. Vol. 30, No. 7, pp. 521-522. Modified version designed by H. Dale Carrier, Parkland Junior High School, Louisville, Kentucky.

**Yes, But Not Here*.

APPENDIX D. PROMISING GAMES

FREE-STANDING

ABOLITION
Random House, Inc., 201 East 50th Street, New York, New York 10022

AMERICAN GOVERNMENT SIMULATION SERIES
The American Constitutional Convention: A Simulation Exercise.
Budgetary Politics and Presidential Decision-Making: A Simulation Exercise
The Congressman at Work: A Simulation Exercise.
Decision Making by Congressional Committees: A Simulation Exercise.
Presidential Election Campaigning: A Simulation Exercise.
Science Research Associates, Inc., 259 East Erie Street, Chicago, Illinois 60611

AMERICAN HISTORY GAMES
Science Research Associates, Inc., 259 East Erie Street, Chicago, Illinois 60611

CONSUMER
Western Publishing Company, Inc., School and Library Department, 850 3rd Ave., New York, New York

CRISIS
Western Behavioral Sciences Institute, 1150 Silverado, LaJolla, California

DANGEROUS PARALLEL
Scott Foresman and Company, 1900 East Lake Avenue, Glenview, Chicago

DEMOCRACY
Games Research Incorporated, Boston 18, Massachusetts

DESTINY
Interact, P.O. Box 262, Lakeside, California 92040

DIG
Interact, P.O. Box 262, Lakeside, California 92040

DISUNIA
Interact, P.O. Box 262, Lakeside, California 92040

DIVISION
Interact, P.O. Box 262, Lakeside, California 92040

ECONOMIC SYSTEMS
Western Publishing Company, Inc., School and Library Department, 850 3rd Avenue, New York, New York

EDGE CITY COLLEGE
Urliandyne, 5659 S. Woodlawn Avenue, Chicago, Illinois 60637

EXTINCTION
Sinauer Associates, Inc., 20 Second Street, Stanford, Connecticut

FAMILY LIFE INCOME PATTERNS
Instructional Simulations, Inc., 2147 University Avenue, St. Paul, Minnesota 55114

GENERATION GAP
Western Publishing Company, Inc., School and Library Department, 850 3rd Avenue, New York, New York

GHETTO
Western Publishing Company, School and Library Department, 850 3rd Avenue, New York, New York

INNER-CITY PLANNING
Macmillian Company, 866 Third Avenue, New York, New York 10022

INTER-NATION SIMULATION
Science Research Associates Inc., 259 East Erie Stree, Chicago, Illinois 60611

LIFE CAREER
Western Publishing Company, School and Library Department, 850 3rd Avenue, New York, New York

NAPOLI
Western Behavioral Sciences Institute, 1150 Silverado, LaJolla, California

NEW TOWN
Harwell Associates & Gameophiles Unlimited, Inc., Box 95, Convent Station, New Jersey 07961

PLANS
Western Behavioral Sciences Institute, 1150 Silverado, LaJolla, California

POLLUTION, NEGOTIATING A CLEAN ENVIRONMENT
Instructional Development Corporation, P.O. Box 805, Salem, Oregon 97304

THE REDWOOD CONTROVERSY
Houghton Mifflin Company, 110 Tremont Street, Boston, Massachusetts 02107

1787
Olcott Forward, now distributed by EAV School Services, Inc., Pleasantville, New York 10570

STAR POWER
Western Behavioral Sciences Institute, 1150 Silverado, LaJolla, California 92037

STATE LEGISLATOR
Macmillan Company, 866 Third Avenue, New York, New York 10022

STOCKS AND BONDS
3M Company, St. Paul, Minnesota

THEY SHOOT MARBLES, DON'T THEY?
Learning A&M, Inc., 109 E. Madison, Ann Arbor, Michigan 48104

TRACTS
Instructional Simulations, Inc., 2147 University Avenue, St. Paul, Minnesota 55114

THE UNION DIVIDES
Olcott Forward, now distributed by EAV School Services, Inc., Pleasantville, New York 10570

YES, BUT NOT HERE
Macmillan Company, 866 Third Avenue, New York, New York 10022

EMBEDDED

AMERICAN POLITICAL BEHAVIOR
Bottleneck

COMPARATIVE ECONOMIC SYSTEMS
The Game of Market
Holt, Rinehart, and Winston, Inc., 383 Madison Avenue, New York, New York

ECONOMIC MAN(or ECONOMIC MAN IN THE MARKET)
Market
Benefic Press, 10300 West Roosevelt Road, Westchester, Illinois 60153

FROM SUBJECT TO CITIZEN
Armada
Denoyer-Geppert, 5235 Ravenswood Avenue, Chicago, Illinois

Empire
Denoyer-Geppert, 5235 Ravenswood Avenue, Chicago, Illinois

King vs. the Commons
Denoyer-Geppert, 5235 Ravenswood Avenue, Chicago, Illinois

HIGH SCHOOL GEOGRAPHY PROJECT
Farming
Metfab
Point Roberts
Portsville
Section
Macmillan Company, School Division, 866 Third Avenue, New York, New York

MAN, A COURSE OF STUDY
Caribou Hunting
Seal Hunting
Educational Development Center, 15 Mifflin Place, Cambridge, Massachusetts

SOCIOLOGICAL RESOURCES FOR THE SOCIAL STUDIES
Resources and Arms
in "Simulating Social Conflict," "Episodes in Social Inquiry" Series
Allyn and Bacon, Inc. (1971)